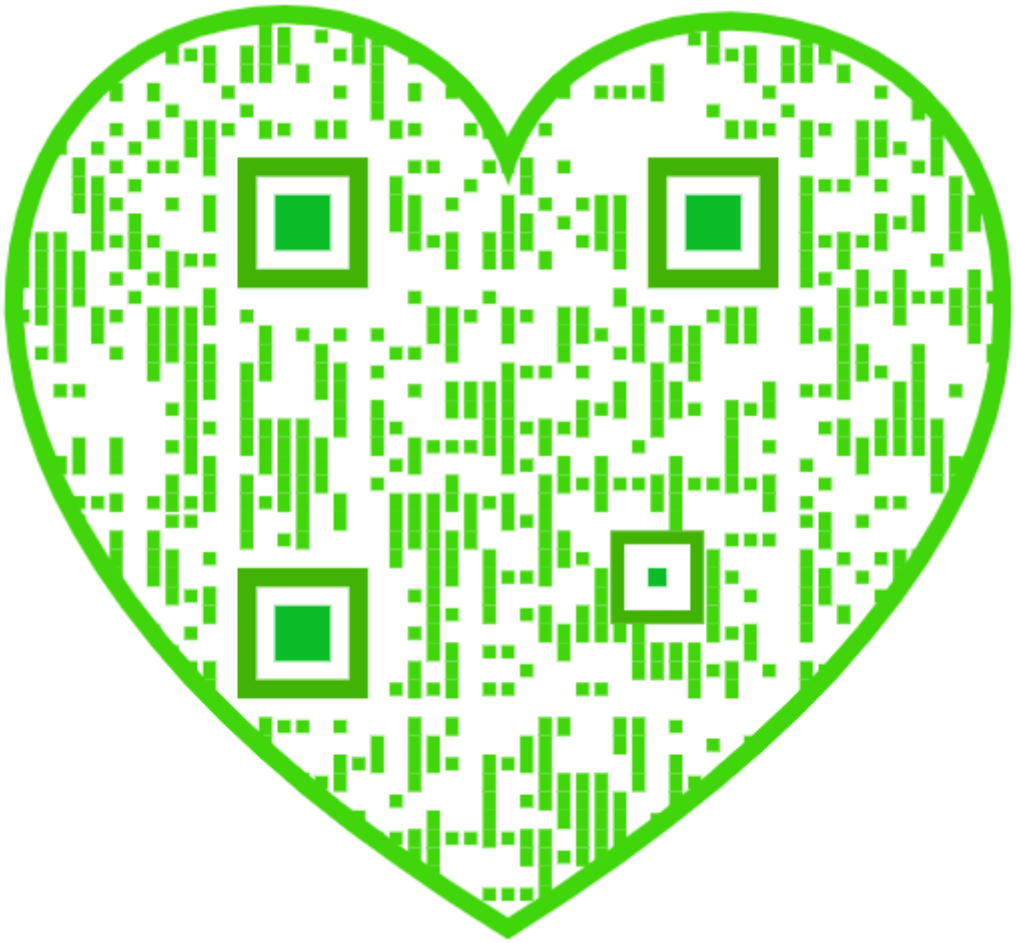

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OSTEOPATHIC GYNECOLOGY

The Diseases of Women

OBSTETRICS

The Great and Growing Danger of Newly Wedded Women. The Great Danger of Women at the Climacteric

HOW TO MAKE MEN RESPECT MARRIAGE VOWS

By

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Author of

PRACTICE OF OSTEOPATHY, with 108 Halftone Engravings, THE OSTEOPATHIC TRUTH, GENUINE OSTEOPATHY, Etc., Etc.

ELGIN, ILLINOIS
1912

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PREFACE

Since giving to the public my work on the Practice of Osteopathy in relation to the general diseases I have concluded that there was needed a simple yet very thorough work on the diseases of women. It is in this realm that Osteopathy does its best work, and here the reputation of the science was largely won. No class of patients respond better to the treatment and none are more grateful than those relieved from the torture of pelvic diseases and the ills that are common to many women.

With some practitioners of the science, the treatment of these troubles constitutes a very large portion of their practice, and it is the hope of the author that he has greatly simplified the technique of the treatment and in many cases added to its effectiveness. He has great confidence in the treatment, as he has been uniformly successful in applying it for a number of years to a large clientele, and believes he has developed it to some extent. The annoyance in giving local treatment has been largely overcome, and the author has learned to accomplish the desired end with very little such work, and believes that the patients improve much faster. It is his hope that this book will be as well received as his Practice of Osteopathy and will prove as effective in its helpfulness.

CHAS. H. MURRAY.

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OSTEOPATHIC GYNECOLOGY

ANATOMY.

The organs of generation in the female are divided into external and internal by those who classify them in such a work as this. We will adhere to the general classification. The external organs are known as the mons Veneris, the labia majora, labia minora, clitoris, meatus urinarius, orifice of the vagina. We frequently speak of all these organs as the vulva.

Mons Veneris is a rounded cushion of fatty tissue covering the pubes, which is covered with hair at and after puberty.

Labia Majora and **Minora** are, as their names indicate, greater and lesser lips which surround the entrance to the vagina. The lesser lips are the inner ones and their internal surfaces have a large number of secreting glands.

The Clitoris is partly hidden by the upper part of the inner lips. It is composed of erectile tissue and is very sensitive. When this is inhibited it dilates the os, the opening into the cervix of the uterus. This is a form of treatment that could be employed when there was painful menstruation, due to the contraction of the os, and it may be made use of in the first stages of child labor. A sharp pull of the hair on the mons Veneris, on the contrary, contracts these muscular

fibers of the cervix and is used often to prevent an abortion or hemorrhage.

The Hymen is a circular fold at the entrance of the vagina, of varying shape, and partially closes that organ, sometimes completely, when it is called an imperforate hymen. It would be well to leave such a hymen alone until puberty, when it should be ruptured. If there are nervous symptoms manifest before that time it might be punctured before. It was formerly considered a test of virginity, but as it has been known to persist after copulation, and even after childbirth, it can no longer be considered as such. On the other hand, an entirely virtuous person may have the hymen torn by a variety of causes.

Bartholin's Glands are found on each side of the commencement of the vagina, behind the hymen. They are about the size of a large bean, of a reddish color, and pour a secretion through two ducts onto the mucous membrane. These ducts sometimes form a lodging place for gonococci and cause pus formation. An abscess may be caused in this region by an external injury.

The internal organs of generation are the vagina, uterus, Fallopian tubes and ovaries.

The Vagina extends from the vulva to the cervix of the uterus. It is about three inches in length and capable of great distension, but its walls are generally in contact and are composed of muscular, erectile tissue and have a mucous lining, which furnishes a secretion that cleanses the vagina. Near the uterus are glands which secrete an acid that acts as a bactericidal

agent in killing germs which otherwise might enter the uterus. For this reason one should not use too many warm douches, as they tend to wash away this secretion which kills disease germs, and it also weakens the muscular structure which composes and holds in place the various organs composing the whole.

The fornices are formed by the union of the walls of the vagina with the cervix, and according to their relation with the cervix are known as lateral, posterior and anterior.

The Uterus is a pear-shaped, slightly-flattened body about three inches in length, two inches in breadth at its largest part, and one inch in thickness. It weighs about an ounce and a half. It is located in the pelvis, between the bladder and the rectum, with the large end, or fundus, upward, with the lower end, or cervix, projecting into the vagina. At this lower end is an opening called the os, which leads into the cavity of the uterus. The uterus varies in size at different periods of life and after the menopause it becomes very much smaller. The cervix varies very much in different individuals. The normal virgin cervix is smooth and about as hard as your nose. It feels to the hand like a rounded cone with a small, depressed, round opening. This opening becomes a long slit in the cases of those who have been pregnant, and an experienced person can determine whether there has been a pregnancy. When diseased it is soft and patulous, as well as when pregnant.

The uterus is a very muscular as well as a very movable organ. Its fastenings, or ligaments, are very

elastic, so much so that during pregnancy it ascends as high as the sternum. It is composed of three coats, the largest of which is muscle and as firm as cartilage. The outer or serous coat is from the peritoneum, while the inner coat is composed of mucous membrane. There are two upper openings into the uterus on opposites sides for the entrance of the Fallopian tubes. There are eight ligaments which keep the uterus in position, one anterior, one posterior, two lateral, which are often referred to as the broad ligaments, and two sacro-uterine, all of which are formed from peritoneum. There are also two round ligaments, composed mostly of muscular structure. All of these are capable of being toned up and put in splendid condition under manipulation of their nerve supply.

The two broad ligaments fasten the uterus to the side walls of the pelvis, and each ligament has two folds in which are contained the Fallopian tube, round ligament, ovary and blood vessels and nerves. They prevent lateral displacements of the uterus. The round ligaments pass from the uterus, just below the entrance of the Fallopian tubes to the mons Veneris. The anterior ligament, vesico uterine, passes from the center of the uterus in front to the bladder. The posterior or recto-uterine ligament passes from the uterus to the sacrum and rectum and forms the pouch of Douglas. The sacro-uterine ligaments are attached to the second and third bones of the sacrum and to each side of the uterus about its middle.

The Ovaries are two almond-shaped bodies

weighing about one and a half drachms, one and a half inches long, three-fourths of an inch wide and one-third of an inch thick. They are fastened to the uterus by the ovarian ligament about an inch in length, and therefore whenever the uterus is out of position there is a corresponding displacement of the ovary. The ovaries are underneath the Fallopian tubes, which form a loop around them and are closely held by the fimbriated extremities of the tubes. When the ovaries are removed the rest of the generative organs become atrophied and functionally valueless. They correspond to the testes in the male and become much smaller after the menopause. The ovary matures the ova and when they are destroyed menstruation ceases. For this reason every effort should be made to save them.

The Fallopian Tubes are four inches long and are for the purpose of conveying the ova to the uterus. The opening into the uterus is very small, about the size of a fine bristle, while the one into the abdominal cavity is larger. When the tube is diseased it fails to carry the ova to the uterus, or if so, very slowly, and then we have a case of tubal pregnancy.

EXAMINATION OF THE PATIENT.

One could hardly do better in outlining the examination of the patient than to give his own method of procedure; a method that grew simpler as the years went by, yet was attended by more satisfactory results. I do not believe that it is necessary, in a great majority of cases, to subject the patient to a long and tedious examination in which instruments are used, and the methods of inspection, in vogue with a great many, are employed.

My reception room was large, well lighted and kept very clean. Everything about it was bright and cheerful. The furniture was mission style and the hardwood floors were well covered with bright-colored rugs. It was not flashy, but not too somber. A large fern was placed at one window. There were plenty of rockers. There was a good supply of up-to-date, popular literature, including some bearing on my own specialty. The bookcases were sectional and the latest medical works were in them.

There were four good-sized treating rooms in connection with the reception room, which contained a treating table, costumer, dresser with mirror attached, and a couch on which many of the patients rested and perhaps took a short nap after the treatment. The offices were well supplied with full-length and full-fashioned kimonos, which the patients donned for the treatment. It took a great number of them so that they could be kept clean. In the treating rooms were

running water and a plentiful supply of towels and soap. The hands were cleansed before and after treatment.

My best asset was a nurse of mature years, kindly and pleasant, not much given to talk, but who easily won the confidence of the patients by her genuine interest in their case. Her assistance was invaluable in the cases of those who were young and timid. She helped them prepare for treatment and, if it were the first visit, told them just what to do. They often told her things which they would be slow in telling a man. Many were held for the treatment who otherwise would have lost its benefit. There are those who do not wish to bring a friend or relative for company during examination, not caring to have them know the extent of their affliction. To such a nurse is a real help. In case she was not otherwise engaged she would meet the regular patients in the reception room and assign them to a treating room, helping them when necessary. Her presence kept me from being bothered with a certain class who knew that the office was being supported solely for the benefit of those who stood in need of medical treatment.

The back of a patient who came for the first time for gynecological examination was thoroughly palpated for the purpose of finding all deviations from the normal. It was tested in all ways as told in the chapter describing a general examination. Many persons who are treated for diseases peculiar to women have other ailments, and they will not receive the expected relief until these other weaknesses are correct-

ed. For some time they might receive needed corrective treatment in the back before any local examination was attempted, and perhaps they might entirely recover without such examination on correction of all lesions found. When you first see the patient let her talk considerably. Encourage her to tell all of her troubles. Learn the age, whether married or single; how many children and when born; miscarriages and when; all about her various labors and their character. Has she headache and where? Backache and its severity. Questions should be asked that would throw light on the condition of the heart, lungs, kidneys, liver and stomach. If she has had a pain or ache, learn when it started and what she was then doing. Ask concerning the menses. Learn as to any irregularity in time or in the amount of the flow, and whether there is any pain. Pain occurring before the flow indicates ovarian disease. Pain during the flow inflammation of the endometrium, and if pain ceases on the beginning of the flow we think of an obstruction of some kind. Inquire about micturition and all vaginal discharges. A thick discharge with an offensive odor indicates badly diseased conditions. If you can get the patient to talk freely she will tell you a great deal without asking many questions. Sometimes I had patients who wished me to tell just what the trouble was without asking any questions. More of them did this because a man in the same town made a point of diagosing without questions. But I told them that it was difficult enough to diagnose when you were acquainted with all the facts at hand. One day

a lady came to me greatly terrified. She had had her case diagosed by a man who held her hand and with the other hand he held a Bible and pretended to feel her pain. He informed her that one kidney was nearly gone, but he failed to tell her of an acute pain which was in one knee. On examination of the urine I found the kidneys to be perfectly normal. Always make a point of examining the urine.

Examination of the Abdomen. Have the underwear removed and the kimono so worn that the abdomen can be fully exposed. The general outline of it will be noted as well as the size, and any enlargement, such as tumors or fat, may be determined, the former appearing prominent in one place and the latter being more symmetrical. The umbilicus is concave and the abdomen flat around it in the normal condition; but if there be much gas, or the abdomen is distended with ascites, the umbilicus is flattened. In palpating the abdomen the patient should lie on the back with the knees flexed. The hand of the operator should be warmed in water and gentle pressure used at first, after which it may be gradually insinuated deeper into the tissues, and all displacements, irregularities, impactions and tenderness noted. When the abdominal walls in any place are tender and contracted the viscera underneath are diseased and inflamed, because the viscera and the integument have the same nerve supply. See Hilton's "Rest and Pain." See part 2 on The Abdomen.

If there is tenderness on pressure just above the pubic bones we would think of cystitis and inflamma-

tion of the uterus, while tenderness in right or left side of the abdomen below the umbilicus might indicate disease of the tubes and ovaries. We cannot be too certain in making a diagnosis of tumor when located in the abdomen. The fifth lumbar vertebra, in thin persons, may be mistaken for a tumor. When pressure is exerted on the iliac artery it may be taken for a pulsating tumor. Fecal impactions, pockets of gas, are frequently mistaken for tumors requiring an operation. I examined a wealthy patient who had been told that she had a tumor requiring the use of the knife. I use the term "wealthy," for I fear that the possession of wealth sometimes calls for an operation with some doctors. She had an intestinal indigestion which caused an accumulation of gas. She was relieved of her trouble in about two weeks. The doctor who diagnosed her trouble said afterwards that tumors sometimes disappeared themselves. They do, but not in two weeks, when as large as croquet balls. The temperature is important. If the lower part of the abdomen is colder than the upper part there is quite likely some pelvic trouble. A lower temperature anywhere is indicative of poor circulation and a weakness in the organs under the cool region.

Vaginal Examination should not be made in every case. Many physicians do so on the slightest excuse and often cause injury to the patient. It may be more frequently done in case a woman has reached the climacteric when we are fearful that there may be cancer. When necessary to make a vaginal examination place the patient in the Sims position, lying on the

left side, pretty well turned to the front, with the limbs flexed. Have the forefinger of the right hand lubricated with vaseline, introduce under the kimono from behind and into the vagina, avoiding the clitoris. This examination need not take more than one minute, and the following points should be noticed: The tone of the pelvic floor, size and tenderness of the vaginal orifice, the condition of the walls and rugæ, the secretions and temperature. Foreign bodies, if any, are noted, and tumors, which are sometimes mistakenly noted as such when there are feces in the rectum. The cervix is carefully examined, whether of natural size or of an infantile character; whether there is a flexion or version of the uterus. What is the size and shape of the os? Whether the cervix is soft or patulous, and if the uterus is freely movable. You may tell whether there is any congestion or inflammation in the tubes or ovaries. Pressure causes considerable pain in a diseased ovary. The fornices may be examined for any abnormality.

Bimanual Examination. The patient lies on the back, with the heels about one foot apart, and the forefinger is introduced into the vagina, or rectum, and the left hand is used in palpating the abdomen. We may thus hold the uterus between the two hands and discover its size, shape and position. The patient may turn on the back while the operator still holds his finger in the vagina, if he has been examining in the Sims position. If all the information necessary has not been obtained, in cases where there is inflammation of the vagina or uterus, or the patient is a young

girl, the finger of the right hand should be introduced into the rectum. Any growth of an abnormal nature may be found in this manner and a diagnosis made in any other manner may be confirmed.

There are various instruments in use, but they are seldom if ever needed: the Sims and bivalve speculum, various sounds and probes, also electric-lighted instruments, which impress the patient but are not of any real value and often cause injury. Some of the author's cases, which had resisted the treatment of eminent specialists and were completely cured by the removal of simple spinal lesions, were examined only once and then very simply. It was not necessary to use the bimanual method in many cases.

Pelvic Examination. Use inspection and note whether one crest of one innominate bone is higher than the other. This may be determined by placing each hand on the crests and noting their relative distance from the table upon which the patient is seated. Note whether one posterior spine of the ilia is higher or more prominent than the other. Note if there is tenderness about one or the other. The waist lines should be compared, and note whether one limb is longer than the other. This is seen while the patient is in the reclining position, and one can determine whether the anterior superior spines of the ilia are of one height and whether there is tenderness in either. Note any tender spots along the spine and see in the second part of this book "The Examination of the Pelvis."

PREVENTION OF DISEASE IN GIRLS.

Preventive medicine is becoming recognized as the highest type of therapeutical knowledge. To keep our patients well is far better than ability to cure them when ill.

This is doubly true with respect to the nerve-destroying, devitalizing diseases and weaknesses peculiar to women. It is very desirable that a knowledge of how to prevent the ills that beset them should be in the possession of every woman, for ignorance and carelessness lie at the root of most of the ills of womankind.

A knowledge of physiological laws, which really should be well known in this day of enlightenment, and an abatement of practices that run counter to these laws of nature, will do much to preserve women in the health, strength and beauty which naturally belong to them. A strong, healthy womanhood means much for the future well-being and happiness, not only of the individual, but of the race.

Heredity plays an important part in transmitting weakness which predisposes to diseases having their seat in the pelvic region. This can be largely overcome if we make the best of what we have in the way of health and strength. Then, by paying proper attention to the laws of nature, better bodies will be transmitted to our successors.

School. The starting point of many of the weaknesses that predispose to pelvic diseases in women

is in the schoolroom. Too frequently the desk is not adapted to the pupil. The seat, or desk, is either too high or too low, or the desk is not properly placed with reference to the seat. The seat should fit the child. The feet should reach and rest on the floor in all cases, yet the seat should not be too low, as this tends to a posterior position of the lower part of the back. The back is thrown back in the lumbar region by having the knees too high. The same effect on the spine will be caused by a low desk. This necessitates bending forward by the pupil to study. When this position is assumed day after day for several hours at a time the spine begins to take on an abnormal curve. This weakens the nerves which supply the pelvic region, coming as they do mainly from the lumbar portion of the spine. The circulation is impeded and disease begins its work.

The desk should be so placed and of such a height that when the pupil is erect a book placed thereon will be from twelve to fourteen inches from the eyes. The slope of the desk should be about ten or twelve degrees. An adjustable seat and back rest, as is used in the public schools of Boston, would be advantageous. No child should occupy a seat in school for any length of time that compels the taking of a faulty position in any of the required work. When the desk is too high a curvature of the upper dorsal region of the spine will be manifest while the pupil is engaged in writing.

The heat and ventilation of many schools are far from being ideal. Many schools maintain a tempera-

ture far too high and the ventilation is very deficient. It would be better for the pupils to wear their wraps if necessary and have the benefit of studying in cooler rooms with plenty of air. They soon tire in the heat and foul air and assume improper positions, because the muscles have lost their tone, as they do when we are tired from any cause. This lowers the vitality of the whole system.

Length of Hours. We are not alone in claiming that between the ages of twelve and sixteen girls should not study more than four hours a day. There should be both bodily and mental rest and plenty of it. The organs of regeneration up to this time have been dormant. The body has been developing along other lines. Now there comes a change. The organs become more vascular, the nerves are more active. The physiological function of ovulation and menstruation begins. That the developing of these organs may proceed properly the nourishment—in other words, the nerve and blood supply—must be increased, as it is under normal conditions.

If, however, the girl is entering keenly into all the school work of the present day, using all her energy to get to the front and hold her position there, taking part in rivalries and competitions, she is using strength that should go to the development of the pelvic organs. The same is true if hard work is being performed in the home or factory. This is the cause of many an undeveloped or infantile uterus. The troubles of many women begin when menstruation first appears. The fault, if traced back, will be found

to have been caused by overwork of some kind resulting in improper development and weakness. This lack of strength may have been in the pelvic tissues surrounding the uterus, resulting in relaxed ligaments which allowed the organ to assume some of the many malpositions common to weakened conditions in this region.

Late Hours. Late and irregular hours are often kept by girls, and are very detrimental to their health. At least eight hours of sleep are needed. This should be had regularly, and the custom of breaking into it for social diversions of various kinds is to be deprecated. Here we might take occasion to say that entertainments which produce emotional disturbances at this period in life have been the cause of sexual weakness. Anything that produces a drain on the nerves, even if it be a protracted religious revival service, tends to the same end.

Bad Books. The reading of books that are sensual in their suggestiveness, looking at pictures of the same nature, or any personal evil communications that tend to inflame the passions are not to be countenanced. They cause an active or passive hyperemia, or congestion of the blood, in the pelvic regions. While they undermine the moral character they tend to deterioration of the physical.

Exercise. We do not wish it understood from the foregoing that girlhood should be a period of idleness. There should be enough of physical work of some nature for sufficient exercise. One can study better after exercise if it has not been too violent.

The exercise should be taken regularly and should be adapted to the needs of the individual. It should be so regulated as to build up the entire body.

Good Food. There should be an abundance of nourishing food. It would be better to have a plain, wholesome diet. Rich food with spices, sauces and condiments should be avoided. Fried foods, and a great deal of pastry, cakes and pickles will be better for the stomach and general health if left out of the menu. I have had occasion to notice in a number of instances where girls, who did not have the best of health at home, on going to good boarding schools improved rapidly and went home in the best of health. The reason could be attributed to regular, seasonable hours, systematic exercise and proper food.

Menstruation. As each monthly period approaches there should be a cessation of the strenuous life. There should be no overwork or extra endeavor, either mental or physical. Neglect during the menstrual period is a fruitful source of female difficulties. Exercises or games which are somewhat violent in their nature, as basketball, tennis, horseback riding, dancing, skating, etc., should be omitted. Sexual intercourse should be absolutely prohibited during the period. There is blood enough in the pelvic region, and further congestion, as caused by coition, leads to tumors, metritis, leucorrhea and other diseases.

Constipation. The lack of attention to the calls of nature is a frequent cause for constipation. The feces accumulate in the bowels and by direct pressure interfere with the pelvic circulation and force the

uterus out of its normal position. They also give rise to the gases and toxic substances which are absorbed and cause headache, neuralgia, and diseased blood. The urine should be voided when necessary. When retained too long it may be a cause of inflammation of the bladder or paralysis of the organ itself. It may also be a cause of uterine disease, because it tends to push the uterus backward out of place and interference with normal circulation.

Dress. Any garment that causes undue pressure on the abdomen and constricts the waist line is a menace to a woman's health. The abdominal walls are frequently weakened and their contents forced downward toward the pelvic floor, obstructing the circulation in this region.

Corsets frequently cause more trouble by pressure on the abdomen than by pressure exerted over the chest. The pelvic floor is weakened, and this allows the pelvic organs to be forced out of position. Any mode of dressing that leaves any portion of the body unprotected, forcing the blood away from the surface to the interior, frequently is a cause of pelvic congestion.

Many cases of female weakness may be traced to high-heeled shoes. Girls should never be allowed to wear them. The bones, ligaments and muscles are not fully developed and the joints are easily changed. The pelvis is tipped and abnormalties of the spine follow, which, as we shall see later, lead to weakness of the pelvic organs.

VULVITIS AND VAGINITIS.

Vulvitis is an inflammation of the vulva, and in this connection we will treat of **Vaginitis,** an inflammation of the vagina. Both may be caused by a lesion of the spine in the lumbar or sacral region, causing a stagnation of the blood. An innominate out of place would also act as a cause. These diseases may be caused by continuity of tissue; that is, malpositions and inflammations of the uterus, causing vaginitis, and this in turn may be the cause of vulvitis; uncleanliness and accumulations of smegma following menstruations, discharges and loss of the normal vaginal secretions, which allow actions of germs of a pathogenic nature. Trauma, attempted abortion and bungling coitus are causes. There may be gonorrheal infection, causing more intense symptoms, which in many cases is a cause of chronic inflammation. This frequently leads to the death of the patient, after operations, and causes untold misery. This is because the infection enters the uterus, tubes, and in some cases the abdominal cavity. The symptoms of inflammation are heat, pain, redness, swelling and loss of function, and these symptoms are present in these diseases. In the specific cases the symptoms are much the same as in the simple forms, but much more severe. The parts are very hot and dry at first, which condition gives way to a muco-purulent yellowish, thick discharge after a few days. The patient feels bad and there is some fever. In fact, the symptoms

are of a varying nature. We will not expect to find them all present in simple cases, and in some cases of gonorrhea they are worse. The treatment is best applied by removing all causes.

Lesions of all natures found in the dorsal, lumbar and sacral regions, as well as those found in the pelvic region, should be removed as soon as possible. The parts should be kept very clean and a mild boracic acid solution may be used. If the case is a severe one rest by being perfectly quiet. This prevents irritation by friction. In cases caused by gonorrheal infection use a rose-colored solution of permanganate of potassium. Care should be taken to prevent the spreading of the infection while taking a douche. In the simple cases a good douche is warm water at about 110 degrees F., with a tablespoonful of salt to a quart of water.

Puritus Vulvae is a very great itching of the regions affected. This is often caused by pressure on the spinal end of nerves that supply the vulva. Dirt, worms, lice, kidney diseases and masturbation act as causes. It comes on during pregnancy and at the change of life. When possible remove the cause. A two per cent carbolic acid poultice gives relief. Apply cod liver oil to the part. Lesions in the lumbar and sacral regions should be looked for in some cases.

Vaginismus is a rare disease. The nerves are irritated, which cause the muscles of the pelvic floor, vagina, and about the entrance of the vagina to be violently and spasmodically contracted. It is a disease of young married women, though I have found it in the case of unmarried women past the menopause. A lo-

cal examination or coitus is impossible. When the case is not fully developed coitus is abhorrent A tender ovary, a displaced coccyx, vaginitis, pelvic inflammation and lesions of the lumbar and sacral regions act as causes. These cases do not get better unless treated; and we expect a cure under Osteopathic treatment. As a palliative treatment one writer recommends applying a pledget of cotton containing a ten per cent solution of cocaine to the vaginal orifice for ten minutes before coitus. Immediately after removing the pledget of cotton apply vaseline to the parts. Surgeons cut and sever the muscles. In all cases of vaginal disturbances look for some anatomical abnormality. Use as few douches as possible and then for cleansing the parts and not as a curative agent.

MENSTRUATION.

Menstruation is a discharge of blood from the uterus and Fallopian tubes that occurs every twenty-eight days from the time of puberty to the menopause. It is a very natural process and it is a wise provision of Nature which prepares the way for the reproduction of the species. In those who have a well-developed sexual passion it appears earlier than those who have a weak sexual instinct.

There are certain signs present before the flow begins that are partly the result of congestion which interferes with the function of some nerves, causing reflex disturbances. The pelvis and limbs feel heavy as a result of this congestion. The thyroid gland, the swelling of which we call goitre, and the throat in general become congested so that the voice is affected. The breasts are swollen and tender and the face may become pigmented. The nervous changes with many are very noticeable. There is a lack of energy and an increase of leucorrhea in amount. There is headache and backache and the entire body seems tender and sore. The flow varies in the case of different individuals. It may be as short as two days in length, or it may last six days and be entirely normal, but the general time is about four days. When the patient is entirely well it may be that this period will be free from pain. This is the ideal condition. However, we do not often find a woman but that has some trouble at the menstrual time.

There may be no menses at all, or they may be scanty, or there may be too much of a flow, or it may be painful. It is also suppressed or irregular or it may begin too early. It may sometimes flow from other parts of the body, and it is then called vicarious menstruation.

When there is absence of menstruation in a woman who is sexually mature it may be caused by a faulty formation of the sexual organs, but this is not often the case; or it may be the result of their imperfect development. Many cases are caused by diseases which greatly weaken the system; as typhoid fever, scarlet fever, tuberculosis, Bright's disease and diabetes. It may be caused by great excitement, fright or excessive joy. Lesions of the spine, which affect the ovaries, are also a cause. These lesions are found in the dorsal region, and the spine is often smooth, stiff and straight, with an occasional twisted or displaced lower rib. These lesions would operate by interfering with the nerve supply of the ovaries, and they in turn affect the whole of the pelvic organs.

The symptoms of **amenorrhea,** or lack of the menstrual function, vary in different cases. With some, who have been overworking, either by study or manual labor, the symptoms may not amount to much. The blood has been used in building up brain and muscle and there is not enough left to start menstruation or to affect the pelvic organs, so there are not any unusual symptoms. But others, who have been leading a more normal life, and who have more blood, will have hot and cold flashes, stomach troubles, pain

in the abdomen, nervous disorders, headache, and other symptoms of menstruation without the flow. We would expect an "infantile" uterus, or atresia, or an imperforate hymen. There may be some lesion of the dorsal or lumbar region of the spine that would cause the undeveloped condition of the pelvic organs.

Where the function has been established and has stopped afterwards for any cause the symptoms also vary greatly. In some there is almost a complete absence, and in others they are very marked. They have the regular symptoms of menstruation without the flow most of the time, and at the time when they ought to flow the pain and discomfort are greatly intensified. If they have distension of the abdomen, accompanied by general loss of strength, it may be that the flow is concealed and still remains in the uterus, and after remaining for a few months will be discharged in large quantities and will be found to be clotted and black. A physician must be on his guard with such cases At one time the author had a patient, who was honest in every particular, bring to his office another who had not had the menses for five months. She was very large in the lower abdomen and claimed a physician had been treating her for a rapidly-growing tumor for some time. I thought it rather peculiar, and being very busy set a time for an examination. The patient did not appear at the appointed time, but about four months afterward she gave birth to a child.

So we see it is very important that the correct diagnosis in all cases should be made. Whether the amenorrhea is the result of some weakened condition,

or due to pregnancy, may be determined by the usual signs of pregnancy which are presumed to be, in addition to the stopping of the menses, morning sickness and an irritable bladder, nervous changes and more inclination to hysteria. The most probable signs are changes in the mammary glands, uterus and abdomen; the nipples becoming softer and larger and the skin about them becoming darker in color. The abdomen and uterus grow progressively larger and the cervix becomes softer about the second month. The position of the uterus changes, first dropping forward and then rising. The positive signs of pregnancy do not appear until about the twentieth week, and they are fetal heart beat, ballottement and quickening. The fetal heart beat is about twice that of an adult and may be heard by applying the ear to the abdomen of the pregnant woman. Ballottement is performed by moving the child in the uterus from one side of the abdomen to the other. The quickening is noted by the mother and the feeling has been said to be like the "fluttering of a bird in the hand." One should be very careful of a wrong diagnosis, as it would be a source of great mortification to the one making the examination and might cause the patient considerable harm. If there are signs that Nature is attempting to bring about menstruation, and these signs are occurring every fourth week, we may rest assured that the stopping of the menses is unnatural and pathological and that we should assist Nature by giving a treatment to reëstablish the function. This may be done by using paragraphs 43, 44, 47, 48, 49, 50, 51, 52, 57, 58, 59, 68.

Considerable work may be done in the lumbar and sacral portions of the spine, and in connection with this I would give a general treatment (which see). On the other hand should the patient be found pregnant such a treatment would be injurious. Should a menstruation be suddenly stopped on account of a cold or getting the shoes wet, or wading in water, or by fright, we will find the muscles very tense in the lumbar and sacral regions. These should be relaxed in a very thorough manner, using the manipulations as found in paragraphs No. 57, 59, 60, 47, 48, 43. Considerable work may be done over the uterus, through the abdomen, thus relaxing the muscles of the uterus. See paragraphs No. 94 to 103.

In case the flow has stopped on account of poor health, and as a consequence the patient has poor blood and very little of that, it would be poor policy to bring on the flow by treatment. The best thing to do would be to build up the health, and to do that we would increase the blood and make it richer and better. This would be done by correcting lesions that affect the vital organs, and having a diet that would make better blood. We would advise plenty of water to be taken at regular intervals, plenty of sleep, lots of good air and manual manipulations.

If the amenorrhea is due to smallness and lack of development of the organs the fault is often found in the lower dorsal and lumbar spine. There are lesions there which interfere with the nerve force or supply of the ovaries. The ovaries are not properly developed, and these organs control the function and ac-

tivity of the other pelvic organs. By increasing the size and activity of the ovaries, through giving them a better nerve and blood supply, we help the other pelvic organs. Often the spine is stiff and the vertebræ too close together. This is remedied by springing the spine, as in paragraphs No. 57, 64. Also we should remove all muscular lesions present. See paragraphs No. 58, 59, 60.

Menorrhagia is a term used to denote a flow, menstrual in character, which is so profuse as to weaken the patient; and she does not recover until she has the menstrual period again. This excessive flow is often caused by a soft and relaxed condition of the uterus. The inner or middle muscular wall of that organ is made up of fibers that act as ligatures on the blood vessels. These fibers, when relaxed, allow the blood vessels to pour out their contents. When this is accompanied by a lack of power of the blood to form clots, which act to stop the flow, the hemorrhage is greater. If there be a congested condition of the uterus it will increase the trouble. The treatment should, of course, attempt to remove the cause. Should the patient be suffering with any blood disease or any trouble that interferes with its coagulability, that should have especial attention. The author has had cases that would not respond to any other form of treatment than the manual. The lesions that we find to be most frequent in cases of this kind are backward twists of the innominate bone. This is usually the case when one leg on that side is found to be the shorter of the two. This causes a relaxation of the

muscles and of the blood vessels, and is responsible for congestion causing the hemorrhage. Another cause of menorrhagia is the growth of fibroid tumors. Frequently we discover that we have the tumors when we are treated for the menorrhagia. The tumors are responsible for the congested condition that caused the flow, but back of this is the lesion responsible for it all. The idea in the treatment is to have the feet higher than the head. Elevate the foot of the bed about two inches. Keep the patient from excitement and worry. Visitors are out of place. Give a strong treatment in the lower lumbar and sacral regions. See Nos. 68, 69, 48, 51, 57. It would be well to give this treatment each day until the patient is better; then every other day for a while and once per week for some time.

Dysmenorrhea, or painful menstruation, includes painful symptoms referred to the pelvis at or near the time of menstruation. Should there be pain for from three to seven days before the flow we refer the pain to the ovaries. If the pain comes on just preceding the flow it is caused by obstruction and may be due to flexion of the uterus. Should the pain only accompany the flow and continue until its close it is caused by inflammation. Should it begin just before the flow and continue through it, we conclude that it was caused by inflammation and obstruction, and if it began some time before we would conclude that there was ovarian trouble in addition. We may give very quick relief in these cases by thoroughly loosening the

muscular structures in the lower lumbar and dorsal region. See Nos. 47, 48, 49, 51, 52, 57.

We do not find the obstructive form alone very often, but it is accompanied by inflammation. It is often caused by anteflexion of the uterus. The blood vessels are obstructed. The uterine walls are brought closely together and the blood is clotted, as it is compelled to remain in the cavity of the uterus until uterine contractions are excited, which cause the pain. The uterus should be placed in proper position, and it will be necessary to do this often, for we must remember that we have a muscle to deal with and it will take it some time to conform to its new or proper position. At the same time the nerve supply must be corrected, which may be done by correcting all bony lesions. See Nos. 104 to 109; also the paragraphs referring to the treatment of the lower dorsal and lumbar regions of the spine. In case the painful menstruation should be caused by an undeveloped or infantile uterus in obstructing the flow, such a uterus may be developed by a prolonged course of treatment. Such treatment presupposes lesions in the lower dorsal, lumbar, and sacral regions of the spine. See Nos. 47 to 57. In nearly all cases of those who have not borne children we expect faulty development to be at the bottom of their painful menstruation. Marriage and the rearing of children are a remedy for this trouble.

In treating these cases of dysmenorrhea we would examine carefully the dorsal and lumbar regions of the spine; the lower dorsal in case there is trouble with the ovaries. The lesions of the lower rib,

especially, pressing downward upon an intercostal nerve, affect the circulation of the blood, which affects the ovaries. These must be corrected and the muscles relaxed which keep these ribs in an improper position. So long as a cause for disease exists we can not expect a cure. See Nos. 90 to 93. It is also of advantage to lift up the intestines. They frequently obstruct the return flow of blood from the uterus and ovaries and cause neuralgia or colic. See Nos. 96 to 97. When there is an anteflexion of the uterus we may sometimes correct it by working deeply over the uterus. To do this properly have the hips elevated and work on the abdomen, with force, from the pubes upward, using the flat of the hand and not the tips of the fingers. See Nos. 94 to 103.

In these cases it is well to look after the general health. The appetite is frequently poor and the patient should be encouraged to take a little nourishing food between meals and before bedtime; a cup of milk or beef broth. Sleep, at least eight hours, is necessary, and plenty of exercise and fresh air between the periods should be had. At the time of the flow it is well to rest in bed. The bowels should be well looked after; the movements should be regular. In constipation the ligaments bind the vertebræ too close together and there is often a posterior condition of the lower dorsal and lumbar regions of the spine. To correct this see paragraphs No. 43, 44, 48, 49, 51, 63. Relax the muscles of the lower part of the back. See paragraphs No. 47, 53, 58, 64. Raise the lower ribs. See Nos. 90 to 92. The bowels may be

manipulated. See paragraphs No. 94 to 100. Have a regular time to go to stool and do not neglect the calls of Nature.

The pain may be greatly relieved by the use of hot water bags or hot sand bags applied externally. A hot water foot bath will be helpful in which a tablespoonful of mustard is placed to a foot-tubful of water.

CYSTOCELE.

Cystocele is a protrusion of the bladder into the vaginal canal, due to an eversion of the anterior vaginal wall. It is a disease of women who have borne children. The vaginal wall, which is a support of the bladder, is greatly weakened during childbirth, it being stretched so much that its tone is lost and a distended bladder is forced downward into the canal. A frequent desire to micturate is the chief symptom of this trouble, and when urine is passed there is still some left in the bladder which may set up cystitis. When the urine is not voided often the parts feel as though there might be a prolapsus of the uterus. In fact, there is an occasional prolapsus of the vagina and uterus, complicating this trouble. In treating this disease remove the pressure on the vaginal wall by frequently emptying the bladder. The bladder may be lifted up, using a sound in the urethra. We find lesions in the lumbar and sacral regions which weaken the supports of the bladder. The walls of the vagina are enervated from this region. Use strong stimulation over the sacrum and this will increase the nerve

force, or supply of the supporting muscles. A muscle is always weak when its nerve supply is poor. See paragraphs No. 51, 52, 57, 58. Occasonally use the finger to smooth out the walls of the vagina.

Rectocele is a trouble caused by the rectum distending into the canal of the vagina. It is frequently caused by childbirth when the attachments that unite the rectum and the levator ani muscles are separated and the result is rectocele. Constipation tends to produce this trouble, and is associated with hemorrhoids. The treatment would be the same as for cystocele, with added treatment for constipation (which see).

THE UTERUS.

The Uterus when normal is freely movable and hangs suspended by muscles, which are called ligaments, in the pelvis, with its fundus at about the brim, and points toward the umbilicus with its cervix protruding into the vagina at about right angles with that organ. The cervix points toward the last sacral vertebra. The uterus is pushed backward by a distended bladder and forward by an impacted rectum. It rests on the pelvic floor and is pressed down by the intra-abdominal pressure from above. Its position should not be regarded as abnormal, though away from the normal, when it does not cause any discomfort. When it gives the patient no trouble it should be left alone. The uterus is supported, in large part, by the pelvic floor of which its ligaments are a part.

The round ligament prevents backward displacement of the body of the uterus, while backward displacement of the cervix is prevented by the utero-vesical ligaments. It is kept from forward and downward displacements by the sacro-uterine ligaments, while the broad ligaments tend to keep it from lateral malpositions. These ligaments are in a slightly relaxed condition and allow some freedom of motion which the normal uterus has. When the uterus is enlarged and relaxed, or does not properly become normal in size after childbirth, the ligaments will be flabby and allow the uterus to move too freely. These ligaments are toned up by the treatment of the spine

and correcting abnormalities of the pelvic bones. This gives the proper nerve force to the ligaments and results in their permanent strengthening. Thus the Osteopath does not give local treatment so much as he gives attention to the nerve supply of the supporting organs. In very bad cases it is customary to replace the organ by local work once or twice per week.

MISPLACEMENTS OF THE UTERUS.

Misplacements of the Uterus. We find it out of position latterly, forward, backward, downward and upward. The least frequent of these is the upward one and may be natural, as in the case of pregnancy, when it is forced out of the pelvis on account of its size after the fourth month. It is also forced upward by tumors and other growths. The backward displacements are two: retroversion and retroflexion. In version the uterus is simply tipped; in flexion it is bent on itself. There are various degrees of retroversion and retroflexion. The forward misplacements are two: anteversion and anteflexion. The downward displacement is called prolapsus; when complete, procidentia. We often find a complication of these displacements.

Prolapsus of the Uterus. When we find the uterus lower than normal we call it prolapsus. There are three degrees recognized. The mildest form is called the first degree. When the cervix is close to the vaginal outlet it is the second degree, and when the uterus is outside the vagina it is the third degree,

or procidentia. It is called by the laity " falling of the womb"; also, "female weakness." It is accompanied by a backward displacement and comes on gradually and very rarely is acute. It is accompanied by backache and a bearing-down feeling, with an uncomfortable feeling in the vagina and pelvis, and becomes worse on standing. There is frequent micturition. There is pain in the limbs, frequently extending to the calf of the leg, which is cramped; and there is an almost constant ache in the spine between the scapulæ, which is a referred pain from the mammary glands, which are reflexly affected from the uterus. Because the uterus is very much congested on account of the poor circulation there is menorrhagia. For the same reason there are both uterine and vaginal leucorrhea. There are headache, stomach trouble, neuralgia and pain in the lower abdomen. Painful menstruation is sometimes a symptom and the patient becomes tired on doing a little work. There is palpitation of the heart and shortness of breath. The bladder and rectum are affected and they often have rectocele and cystocele.

The treatment ought to be given to prevent this trouble. The pelvic floors should be kept in proper tone by keeping their nerve supply just right. This will be accomplished by removing all bony and other lesions as soon as they occur. Every woman, when she has given birth to a child, should be examined for pelvic lesions and they should be corrected at once. Do not walk too much after childbirth. Attend to the calls of nature. Avoid constipation. Do not wear

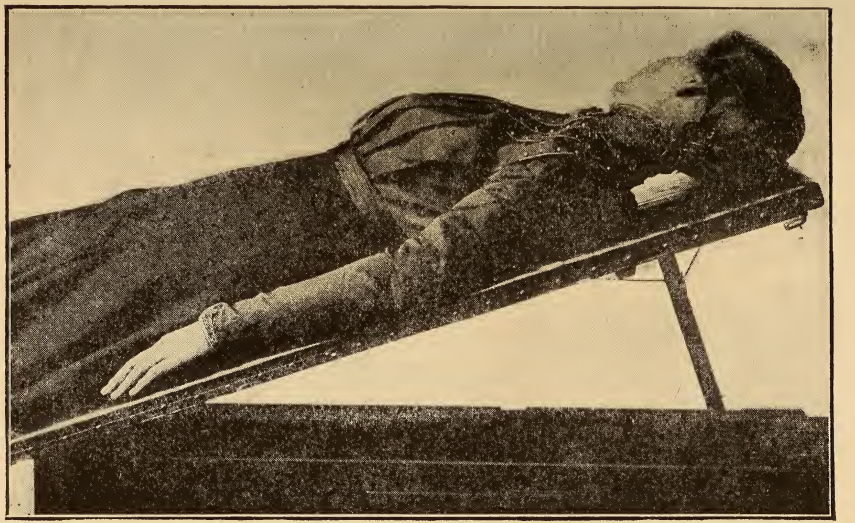
tight bands nor carry the baby in the arms nor lift it much. The best time to replace the uterus is at night, before retiring. At first give the spine a treatment. See Nos. 32, 34, 43, 47, 48, 50, 52, 57, 58, 68. All of these treatments are not given at once, but are referred to here so that a choice may be made. The abdomen is now treated as in Nos. 94 to 100. All of these figures refer to paragraphs in part two.

We are now ready to replace. See the positions of hands taken when making a local examination. When both you and the patient are in the proper position use steady, gentle pressure until the uterus is put in place. The patient may take the knee-chest position two or three times per day and should do so always on retiring. Continued treatment will cause the uterus to become lighter and the ligaments to grow stronger. Be sure that all the lower vertebræ, sacrum, coccyx and innominate bones are kept in position. Separate and close the knees against resistance and frequently contract the sphincter muscles of the rectum as if you were keeping from defecating. Lie on the back and slowly elevate the limbs. These exercises will strengthen the muscles that support the uterus. Do not use astringent washes or pessaries. Do not allow the uterus to be stitched to the abdominal wall, nor the round ligament to be shortened. It leads to abortion and difficult labor and is a failure in many cases.

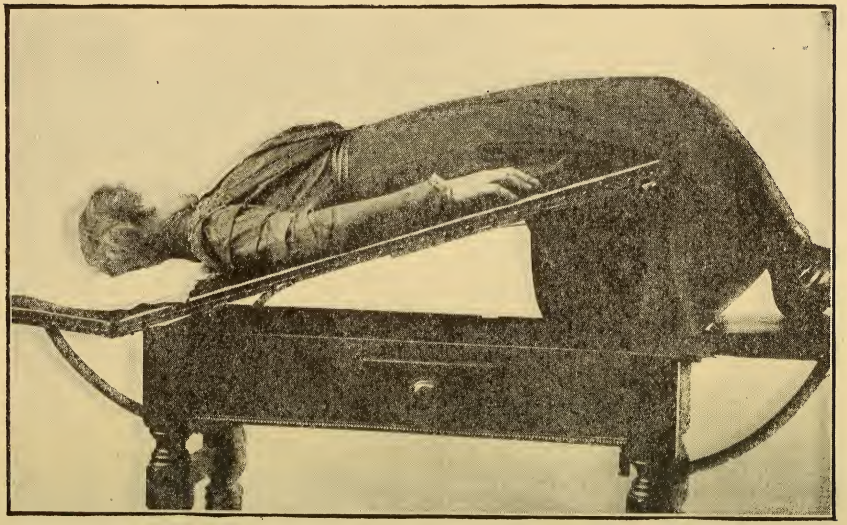
Anteversion of the Uterus. Inflammation makes the organ heavy and causes it to drop forward. Tumors and pregnancies do the same. The patient will complain of frequent micturition and there may be

Knee Chest Position. Fig. A.

Elevated Pelvic Position. Fig. B.



Depressed Pelvic Position. Fig. C.



Trendelenburg Position. Fig. D.

cystitis. The anterior fornix is shallow and the cervix is high. The fundus is felt through the anterior fornix. A rectal and bimanual examination makes the diagnosis certain. To replace the uterus treat the spine and abdomen as in prolapsus, and place in the dorsal position with a pillow under the hips; or if you are treating on a table you might elevate its cover at the foot. Place the finger in the anterior fornix and lift the uterus up. Pull downard on the cervix. When the patient is thin you can grasp the uterus through the abdomen with the external hand, and as you thus hold it between both hands it can be put in place. You can not do this with a fat person. With the girl or unmarried woman avoid local treatment if possible. Elevate the hips and manipulate the abdomen upward from the pubic bones. The prognosis is good if the general health is good.

Anteflexion of the Uterus. The organ is bent forward on itself. This tends to close the canal of the uterus. The usual place of the flexion is at the junction of the cervix and the body of the uterus, and here the muscle fibers are weakened. When this condition exists for some time tissue changes take place, and the concave side becomes hard and the flexion is very hard to cure. Adhesions form on account of inflammation and the position is fixed. A lesion that affects and weakens the anterior wall of the uterus is one of the principal causes. The walls are inflamed and weak. Lifting and other strains force the body of the uterus farther forward and the flexion continually grows worse. Tight clothing makes the condition worse.

The symptoms are frequent micturition, cystitis, backache. If there is inflammation of the lining of the uterus, called endometritis, there will be dysmenorrhea, or painful menstruation. If there is no endometritis the pain will stop when the flow starts. On examination the cervix is in normal position, but the posterior lip is shortened, and as we examine the anterior wall of the uterus in the anterior fornix we find a curve where the uterus is bent on itself.

The treatment is first directed to the correction of all bony lesions. In replacing the uterus have the hips elevated. With one finger in the vagina raise the organ, when it may be taken by the other hand and placed in position. When the patient is too fat we must rely on the vaginal finger to do the work. If there are adhesions they must be broken up gradually by massage. To do this hold the uterus up with one hand and massage through the abdomen with the other, as the patient can stand the treatment. See the treatment for anteversion and treat girls like there described whenever possible.

Retroflexion of the Uterus. Retroversion precedes this trouble in most cases. Inflammation is a forerunner. Lumbar vertebræ, innominate and sacral lesions act as a cause. Constipation is often found before. This is a very frequent condition confronting the gynecologist. Sometimes it is a cause for sterility, but very frequently comes on after the birth of a child. When the patient is lying on her back a great deal, after childbirth, the uterus is forced back and down by the pressure of the intestines. Adhesions are

formed, resulting from inflammation, and soon a case of well-developed retroflexion is in existence.

The symptoms are backache, headache, pain in the back of the neck, with a drawing sensation, pain in the limbs, sometimes sciatica. There is pain between the scapulæ, and when there is metritis, inflammation of the uterus, there is considerable pain in the pelvis. When there is endometritis there is leucorrhea. There is dysmenorrhea in some cases. In making a diagnosis the simplest way is to insert the finger in the rectum while the patient is lying on the side. It comes in contact with the fundus through the rectal wall. If there are no adhesions it may be pushed forward into place. The uterus is mostly muscular fiber, and it takes some time to make a permanent correction, during which all bony lesions of the surrounding tissues should be corrected. The author once treated a case of retroflexion which he discovered while he was treating a case of piles. The patient had said nothing about the retroflexion, thinking it incurable, because it had been once fastened to the anterior abdominal wall by a surgeon, but had broken loose before leaving the hospital. In that case the uterus was pushed forward through the rectum and was grasped by the other hand through the abdominal wall and pulled and straightened into place. The patient was very thin. This case was cured in less than three months. It had been the cause of piles and stomach trouble. The case was treated three times per week and the uterus worked with once per week. Adhesions may be corrected by absorption. This is done

by correcting the circulation through adjusting the surrounding tissues. In treating a case, give the abdominal and spinal treatment as in prolapsus, which see. The patient should take the knee chest position as in the treatment for prolapsus. Do not wear tight clothing and avoid lifting. Complete cures are the result.

Retroversion of the Uterus. In this trouble the uterus is tipped back but not bent. It varies from a slight misplacement to being tipped as far back as it should be to the front. The causes may be enumerated as sudden movements, slips, falls, lifting while in a stooping position and strains while carrying a load. It tends to retroflexion, and lesions of the innominate bones, sacrum and lumbar vertebræ predispose to the trouble. The symptoms are those of retroflexion and the treatment is much the same.

Lateral Deviations. There are no new symptoms. The innominate is generally at fault on the same side. This should be corrected and the uterus replaced. In cases of uterine displacements we may expect to have disturbances of the ears, eyes, teeth, thyroid glands and tonsils. The mammary glands, heart, liver, stomach and kidneys are affected. There may be pain in the legs, feet, heels and toes.

TUMORS OF THE UTERUS.

Tumors of the Uterus. About one-fifth of all women over thirty-five years of age are subject to this disorder. Women who do not have children have them most frequently. There are three varieties with reference to position. They are submucous, interstital and subperitoneal; inside of the uterus, in the wall of the uterus and outside of the uterine wall. Lesions of sacrum, innominate, and a stiff, smooth lumbar spine predispose to them. Anything that causes repeated pelvic congestion will cause a tumor. Among these may be mentioned coitus, masturbation and ungratified sexual desire. The uterus was intended to bear a child, and when this is impossible it often produces a tumor. A misplaced uterus tends to their formation. The symptoms are hemorrhage, backache, pain as in childbirth, when the tumor is inside of the uterus and pedunculated; abortion, sterility and, in general, the symptoms of a misplaced uterus. When there are large tumors they may be palpated as irregular masses through the abdominal walls. When you use the bimanual method of examination you may determine the hardness and size of the tumor. Pregnancies, cancers, displaced uteri and impacted bowels are mistaken for tumors and sometimes vice versa. Hard, large, fibrous tumors are slow in yielding to treatment. The symptoms of one as large as a croquet ball will be removed in a year, but not the tumor. Solid uterine fibroids occasionally disappear at the meno-

pause without treatment. In treating, remove all bony lesions and lift it up as much as you can. See No. 97. This improves the circulation. Do not massage the tumor. Keep the patient from walking or standing too much and avoid constipation. In case the patient has a large, hard tumor and it causes considerable pain and the patient is not near the change of life, you might advise an operation, but when the tumor is small, or there is no pain, or the menopause is nearing, never have the patient submit to an operation. A patient had severe pains at the menstrual time for years. A hypodermic was always administered and the doctor advised an operation. This continued for eight years and the woman was denied children. On examination a tumor inside the uterus was found. The lower lumbar vertebræ were stiff and straight. After six weeks a tumor the size of a hen's egg was passed at the menstrual period, and a month later a number of smaller ones were passed. After that the patient bore a fine boy. The severe pains spoken of were caused by the uterus attempting to expel the tumor at the menstrual period. They were like childbirth pains.

CANCER.

Cancer or carcinoma is a malignant disease. It frequently attacks the cervix, mammary glands and face. Heredity and age are causes. The almost constant irritation of a part tends to set up a cancer. Operations act as a cause. Many cases diagnosed as cancer have been cured by the Osteopath. When it is

a uterine cancer hemorrhage will result. Sometimes the flow is almost constant. When ulceration sets in there will be a watery discharge and the odor will grow very offensive as the ulceration grows worse. Then there will be sharp, shooting pains in the pelvis, back and limbs, and the disease will affect other organs by continuity of tissue. The patient has a peculiar-looking face after the ulceration begins. It is called a cancerous face and becomes a light yellow. There is loss of flesh, stomach trouble and general debility. In making a local examination the cervix is soft and easily broken. This is a disease in which inspection may be allowed and the cervix has a rough, cauliflower appearance. It hardly ever appears before the age of forty-five. Do not make the mistake of diagnosing an ordinary tumor, laceration, ulceration or erosion as a cancer. In treating cancer work to improve the circulation. Do most of the work in the lumbar and sacral regions. See Nos. 32, 43, 47, 48, 50, 52, 57, 58, 68.

INFLAMMATION OF THE UTERUS.

Endometritis is an inflammation of the lining of the uterus. It may be caused by exposure to inclement weather, any mental shock, which would stop the menstrual flow, overwork, the use of pessaries in the vagina, or the introduction of foreign bodies into the uterus; drugs, gonorrhea, induced abortions, parturition. Back of all is the lesion. The most common lesions are of the innominate, sacrum and lower lumbar vertebræ. These lesions weaken the uterus by disturbing the nerve supply and reducing its resistance to disease, and also make it more liable to misplacements, which in turn are a cause of endometritis.

The symptoms are the symptoms of all inflammations: heat, pain, redness and swelling. They extend to surrounding tissues and cause abdominal pains. Painful menstruation is in proportion to the inflammation and there are whitish, milky-looking discharges. Headache, backache and various reflex pains are found in common with other uterine disturbances. The treatment is to remove all bony lesions. Their removal stimulate the nerves to a better work and improves the circulation. Remove all causes for the trouble. Do not allow curettage. Do not use any great amount of hot water douches.

Metritis is a most important subject from the gynecologist's point of view. It is an inflammation of the body of the uterus. It is found in connection with

endometritis, and each may be caused by the other. It may extend to the surrounding tissues, and perimetritis is the result. The causes are in part the same as in endometritis (which see). The bony lesions are very important. The symptoms are more severe than in endometritis. The abdomen is tender and sometimes swollen. There are symptoms of peritonitis. There is pain in the uterus, pelvis and back. There is much bad-smelling leucorrhea. Some persons will have all the symptoms of hysteria. There is often pronounced stomach trouble. The whole body of the uterus is large and soft.

The treatment is directed to the removal of all bony lesions, full directions for which will be found in the second part of this book. The bowels should be kept open. Being in the open air is a splendid thing, but keep off the feet.

SUBINVOLUTION.

Subinvolution is a condition where the uterus does not contract as it should after childbirth or abortion. The causes are bony lesions, producing a weakness of the organ. These lesions may occur at the time of childbirth. Among other causes which contribute to the condition is the fact of not nursing the child. The nerves of the nipple when stimulated by a nursing child act reflexly and help contract the uterus. When the uterus remains large and relaxed the surrounding tissues are the same. Even the abdomen is

enlarged. Do not get up and around too soon after a child has been born. You may have all the symptoms of a misplaced uterus and they will vary with the inflammation set up. In fact, the trouble leads to various forms of misplacements, through weakness of the supports.

The treatment consists of removing all bony lesions that are found. Give a strong and vigorous treatment in the lumbar and sacral regions for the purpose of stimulating the nerves and contracting the muscles of the uterus and its supports. See Nos. 43, 47, 50, 57, and 58. Lift up the load of pelvic contents out of its enteroptosed condition. See Nos. 94 to 100. Have the patient assume the knee chest position often. It is well to do this just before retiring as well as at different times during the day.

SALPINGITIS.

Salpingitis is an inflammation of the Fallopian tubes. It is not very often found alone, but there is inflammation of the uterus or ovaries accompanying the condition. It is very often found only on one side. There are all the symptoms of inflammation present, and if it is caused by gonorrhea it is almost incurable. If there is any flow the menstruation is very painful. The least motion of the body produced in walking or riding causes pain in the tubes. A chronic case of the disease may follow an acute attack. A latent form of gonorrhea, in the husband, may cause a chronic form

of salpingitis in the wife, and it most likely can never be cured. The Osteopathic treatment is for the purpose of removing all bony lesions existing in the pelvis. Some careful work may be given in the abdomen, as in paragraphs No. 94 to 100.

DISEASES OF THE OVARIES.

The diseases to which they are subject are misplacement, inflammation and tumors. As they are in the walls of the broad ligament they are placed out of position every time the uterus is misplaced. In cases of retroflexion they may be found in the pouch of Douglas, and in cases of constipation are quite painful as the fecal mass passes, as it presses upon them. Such an ovary causes nausea when pressed upon. When the patient is thin one may palpate them through the rectum or on bimanual examination and they will cause a pain similar to pressure on a testicle. You will find pain in the knee, heel, and also in the back, in the region of the three lower dorsal vertebræ. Nausea and vomiting are common. The ovary is very much subject to congestion at the menstrual period. Ungratified sexual desire is a common cause. This increases the blood flow to the ovaries. The trouble may follow scarlet fever, smallpox and mumps. When treating this condition relax the muscles of the back. Work carefully over the congestion and inflammation to relieve it. See paragraphs 94 to 100. Rest will be advised. The ovary may be placed in position by very gentle pressure when the patient is in the knee-chest position. The index finger will be placed in the posterior fornix of the vagina for that purpose. Splendid results may be gotten from the treatment when it is carefully given.

Ovarian Tumors. These are mostly cystic. Treat as above and for ordinary fibroid tumors. In most cases you will perform a cure. Be sure and treat all the vertebral lesions and look for them in the lower dorsal.

SICK HEADACHE.

(Migraine, Hemicrania, Cephalgia.)

Migraine is an intense headache, occurring frequently, with or without disturbances of vision or of nausea. Medical writers as a general rule claim that no lesions have been discovered, but Osteopaths frequently find neck lesions, and also upper dorsal

lesions, the removal of which has resulted in cures.

The patient can tell for some time previous when an attack is to be expected, by the sensations and symptoms peculiar to each given case. The pain at the beginning of an attack is on both sides of the head, but after awhile it localizes on one side. With some patients the attack localizes on one side at one time; at the next time it localizes on the other side. Some cases continue from childhood to old age.

Most of the lesions have been found in the neck and upper dorsal region, though some have been found in the lower dorsal and lumbar regions. Stomach troubles, uterine misplacements, eye strain, and tumors are sometimes responsible. These causes must have special treatment.

Treatment. The neck must be thoroughly manipulated. See Nos. 1, 3, 5, 7, 9, 10, 11, 13. All spinal muscles and tissues should be relaxed. Nos. 4, 43, 48, 53. The abdomen should receive a deep inhibitive treatment. Nos. 94 to 99. Give heavy pressure over the solar plexus. No. 100. Misplaced vertebræ and ribs should be corrected. Tissues over the nerves in the face should be relaxed. Nos. 14, 20, 21. Work vigorously and deeply with thumb and finger on a line straight over the head, from the nose to the base of the skull at the back of the neck. See No. 16. Give heavy pressure on the skull. No. 15. Give heavy deep treatment at the base of the skull, on each side of the spine. This may be temporarily painful, but will be effective. No. 7B.

Pressure may be given in the upper dorsal region. No. 67. The clavicles should be raised. Nos. 72, 73. The treatment should be given deliberately, and is probably the longest that the Osteopath gives. Great relief should be given during the first treatment. A very general treatment will be helpful. See general treatment. Give particular attention to the stomach and bowels. The patient should avoid overexertion, as becoming tired acts as an exciting cause. A hot mustard foot-bath, heat at the base of the skull, and an ice bag on the forehead is often helpful. Should there be nausea, use the ice bag on the spine from the fourth dorsal down to the first lumbar vertebra. Some patients are helped by a cup of strong, clear coffee.

The drug treatment for this condition is very unsatisfactory. Headache powders, pills and the various pain killers are dangerous. The extract of cannabis indica is sometimes given for a long time, two or three times per day, in doses of a fourth to a third of a grain in hope of curing the condition. At the time of the attack the following pills are sometimes given:

Acetanilid .....20 grains.
Codein Sulphate .....5 grains.
Camphor monobromate .....5 grains.

Make of this ten pills and take one every two hours until relieved. The heart action should be watched when using these pills. Menthol pencils are used locally for the purpose of relieving the pain. Rub them over the seat of the pain.

TUMORS.

Fibroid Tumors, Benign Tumors, Malignant Tumors.)

Tumors of every nature have been removed by osteopathic treatment. In addition to those above, many uterine tumors, as well as ovarian and cystic tumors, fatty tumors, abdominal and intestinal tumors, even those supposed to be of cancerous nature, have been removed under the treatment. Especially good results have been secured with tumors of the breast.

The cause for most tumors will be found in some spinal or other bony lesion, or in some misplaced soft tissue which interferes with the nerve supply or with the circulation, especially of the venous and lymphatic drainage of the part affected. When the blood or lymph at any given point is obstructed, whether it be from a defective nerve supply or by direct pressure of some bone or organ, that blood or lymph often causes an abnormal growth or tumor.

Abdominal Tumors. In case the tumor is located in the abdomen it will be well to carefully examine the spine for any spinal lesions, and remove them, using Nos. 34, 43, 44, 36, 37, 41. The ribs must be carefully looked after and any misplaced ones must be corrected. See Nos. 81 to 93. The abdomen must be carefully treated, as in Nos. 94 to 100. Should there be enteroptosis (which see), that must be treated according to directions. In general, tumors should not be worked directly-over or massaged,

but they may be lifted up and their position carefully shifted and adjoining tissues may be manipulated. A general treatment is often advisable for the entire circulation and for the nervous system. Treat about three times per week. When better treat twice and once per week. The treatment in the main is directed to restore the proper circulation. In some cases the treatment must be continued for some time, but often the improvement is noted soon.

Uterine Tumors. Intrauterine, extrauterine or interstitial tumors are frequently removed by osteopathic treatment. The intrauterine tumor is frequently pedunculated, and at the menstrual period causes great pain, because the uterus at that time tries to expel it. The interstitial is a part of the enlarged wall and the extrauterine is on the outside of the wall and attached to it. These tumors are frequently caused by a misplaced uterus. This correction should be made by a well-qualified practitioner. Very frequently there is a luxated pelvis, or innominate bone, or a misplaced vertebra which, when corrected, restores the proper circulation and results in the removal of the tumor. In addition to the local corrective work necessary the spine and innominates may be treated. See Nos. 43, 51, 52, 57, 104 to 112. In addition to the above a general treatment, which see, will be found very beneficial as the patient is generally nervous.

Ovarian Tumors will require a careful examination of the lower spine and the removal of all lesions found, and the pelvis should be looked after and

treated in the same careful manner. See treatment for uterine tumors. The abdomen should be carefully treated as in Nos. 94 to 100. Lift up the tumor and carefully manipulate the tissues about it, but do not work directly over it.

HYSTERIA.

Hysteria is a functional disease of the nervous system. It is characterized by loss of self-control, and accompanied by disorders of all or a part of the bodily functions. It occurs most frequently in women and children.

Osteopaths look for the primary cause in some bony lesions of the spine, or ribs, or pelvic bones, or some malposition of some organ. The secondary causes may be emotional disturbances, mental or

physical strains, domestic troubles, masturbation, sexual excesses, ovarian or uterine diseases.

The symptoms cannot be said to follow any fixed rule, as a hysterical patient can imitate any symptom or diseased condition. The patient frequently feels a ball in the throat, which seems to come from below and produces a choking sensation. This is referred to in medical literature as "globus hystericus." There may be convulsions, after which the patient seems to be bloated with gas, and passes large quantities of urine. The voice is often lost and the various forms of paralysis are often simulated. The joints may become stiff and there may be spasms. Intense pain may develop in the head, spine, abdomen, or ovarian region and in the breast. There may be rapid and difficult breathing, vomiting and nausea. The temperature is nearly always normal.

Treatment. Particular attention should be given to the lower ribs. They are often found displaced, generally downward. See Nos. 90, 91, 92, 93. The intestines should be lifted up. See Nos. 96, 97. A general relaxing treatment should be given. See general treatment. Remove any lesions found in the spine or ribs. A change of environment may be helpful in many cases. The patient should be dealt with kindly, yet firmly. If possible, get the patient to exercise self control. A warm tub bath twice per week and a cold sponge bath every morning, followed by a brisk rub, will prove helpful. Out of door exercise should be taken each day. If a child,

avoid overstudy under competitive methods. Avoid overindulgence of every nature. Let the diet be plain but let there be plenty of nutriment.

INSOMNIA.

(Sleeplessness.)

Insomnia may be due to various causes. Congestion or anæmia of the brain, Bright's disease, liver, stomach and intestinal disorders may cause sleeplessness, or it may be due to nervousness or excessive headache. The Osteopath believes, and has splendid success in following it out to its legitimate conclusions, that the basis of the trouble may be found in some bony, ligamentous or other lesion, that disturbs the circulation and allows pressure to disturb proper nerve function. A large number of these cases are met and successfully overcome by the Osteopath. Frequently an improvement is noted with the first treatment. In many cases but few treatments are required.

In treating for this disorder the Osteopath looks for neck and upper spinal lesions. He pays particular attention to the clavical and two upper ribs. See Nos. 72, 73, 75 to 81.

Fully relax all spinal tissues. See Nos. 34, 36, 43, 44, 53. Give a strong abdominal treatment. See Nos. 94 to 100. After the specific lesions, that are found, are treated, a general treatment is in order. See general treatment.

When the person is excitable and there is a feeling of distension in the head, it will be well to keep the bowels regular. See the treatment for constipation. At night before retiring a hot bath, followed by a cool sponge bath, will be beneficial.

Another help is a cold pack applied to the abdomen. This soon becomes warm and draws the blood there. See cold pack. Ten minutes of good, cool, pure air, breathed properly, will materially assist in gaining needed rest. See correct breathing. It is often recommended that a glass of warm milk be taken just before retiring. Medical writers recommend a dose of trional, ten to twenty grains, to be given with food half an hour before retiring.

If the insomnia is caused by anæmia of the brain the patient is apt to start sleeping very well, but wakes later and can not fall asleep again. In addition to the osteopathic treatment as outlined above, cold water or ice, then hot water, may be applied to the spine in long rubber bags, each for fifteen minutes. For this form of insomnia medical treatment would recommend some form of stimulant at bed-time, say one-sixtieth of a grain of strychnine, or some form of alcoholic drink.

NEURALGIA.

(Facial Neuralgia, Brachial Neuralgia, Intercostal Neuralgia, Spinal Neuralgia, Neuralgia of the Stomach, Tic Douloureux.)

Neuralgia is a severe pain along the course of a nerve, unaccompanied by any change in the body of the nerve.

The Osteopath usually finds some bony or muscular lesion causing pressure on the nerve or on some of its connections. A misplaced vertebra is

a very common cause. In cases of facial neuralgia we expect to find contracted muscles in the neck or a misplaced atlas or axis, the first and second cervical vertebræ. Treatment for this would be as in Nos. 1, 3, 5. In brachial neuralgia, which involves the arm and shoulder, we look for lesions from the first cervical to the sixth dorsal. This will be treated as in Nos. 1, 3, 5, 9, 10, 11, 34, 43. All the upper spinal and neck tissues will be relaxed as in Nos. 5, 83, 34. Intercostal neuralgia is easily handled and is frequently caused by a twisted or misplaced rib or ribs too close together. Treat as in Nos. 75 to 89. Thoroughly relax all spinal tissues, as in Nos. 35, 36, 47, 48, 50.

Spinal neuralgia and neuralgia of the stomach will be caused by misplaced vertebræ, the stomach lesions occurring from the fourth to the eighth dorsal. See spinal treatments. Nos. 43, 34.

Tic douloureux is a neuralgia of one or more branches of the fifth nerve, and lesions are looked for in the upper dorsal and cervical regions. A misplaced atlas or axis is most frequently to blame for the condition. Treat as in Nos. 1, 3. Pay attention to the upper back tissues, as in Nos. 34, 43. In many cases a thorough abdominal treatment will be of assistance. See Nos. 94 to 100. In all cases of neuralgia or of neuritis the muscles and nerves should be relaxed.

In facial neuralgia, tic douloureux and brachial neuralgia a hot water bag may be applied to the back of the neck and the upper dorsal region. Tic

douloureux has been helped locally by the application of the inner skin of a fresh egg, sprinkled with black pepper. Some medical writers in cases of tic douloureux, recommend one one-hundredth of a grain nitroglycerine until relief is obtained.

OBESITY.

(Corpulence.)

Obesity is an excessive amount of fat, that not only becomes an inconvenience but seriously impairs the health by infiltrating and weakening the heart muscles, also the lungs, liver and kidneys.

The controlling factors may be heredity, bad habits of eating and drinking, lack of exercise, and spinal lesions which interfere with the proper work of the liver, pancreas and lymphatic system.

This condition must not be overcome too suddenly. The lesions may be removed as soon as possible. The clavicles are to be raised and the first rib lowered. See Nos. 72, 73, 75, 76. A thorough spinal treatment must be given for the stimulation of the liver, pancreas and kidneys. See Nos. 32, 43, 57. Vigorous treatment over the fat tends to its absorption. Give a general treatment, which see.

Diet. The diet must be restricted. Starches, fats and sweets are to be eliminated as much as possible. The use of water is to be restricted and alcoholic drinks are to be prohibited.

Regular exercise must be taken. If the heart is weak begin moderately and gradually increase the exercise. Walking is very beneficial.

Some medical authorities give from three to five grains of the dry, powdered thyroid gland, three times per day. It must be discontinued when it causes any heart disturbance. It should not be taken if there is any heart trouble.

CYSTITIS.

(Inflammation of the Bladder.)

This inflammation may be acute or chronic, and may be caused by gonorrhœa, unclean catheters, retention of urine, and colds.

The symptoms are bearing down pains over the bladder, with tenderness in the same region on pres sure. The urine is scanty and often highly colored. It may be tinged with blood and contains blood and mucus.

Treatment. The patient should rest in bed, with the hips slightly elevated. Remove any lesions found in the lower dorsal and lumbar regions, and stimulate over the lumbar and sacral region. See Nos. 51, 52, 57, 58. Should there be pain in the bladder inhibit in the above regions. See No. 67. Local abdominal treatment should be given, lifting up on the contents of the abdomen, especially the lower part. See Nos. 96, 97. Give a thorough general and inhibitive treatment to the bowels. This helps to draw the blood away from the bladder. See Nos. 94, 95, 100. Treat in acute cases once or twice daily.

Hot sitz baths and hot applications over the bladder will be helpful. Use the liquid diet. Drink plenty of water. Peppermint tea is splendid. The medical treatment often recommended is to keep the bowels open with the use of salts. Irrigation of the bladder, with a soft rubber tube and a fountain syringe, using a two per cent solution of boric acid. A formalin solution is used for the same pur-

pose, five to ten drops to a pint of water. In either case the water should be sterilized by boiling.

UREMIA.

Is a poisoned condition of the system, which sometimes develops in nephritis or anuria, due to the presence of toxic material, which should have been eliminated by the kidneys. It may also follow gout, scarlet fever and typhoid fever.

The onset is sudden, the face is pale, pulse is slow. There is often a dropsical condition and the breathing is difficult. The urine is scanty and contains albumen. There is nausea, vomiting, delirium and convulsions. There may be paralysis.

The treatment is administered for the purpose of stimulating the kidneys and skin to activity. Thorough work must be performed from the fifth dorsal to the second lumbar vertebra. See Nos. 43, 44, 48, 51, 52. Treat the abdomen deeply and thoroughly at and above the umbilicus. See Nos. 94 to 100. Treat the upper dorsal and neck region to stimulate the heart and lungs. See Nos. 53, 1, 5, 7B, 7C. Raise the ribs. See Nos. 81, 88. Treat strongly at the base of the skull. See No. 7B. Give a warm salt water enema, in which a tablespoonful of salt has been dissolved to each quart of water. Hot packs will help to induce sweating.

Some medical authorities advocate active purging, with the use of salts. To induce sweating use either the hot bath or give one-tenth of a grain of pilocarpine three times per day.

ANURIA.

(Suppression of Urine.)

Anuria commonly means that the urine does not reach the bladder, a suppression of urine. Cases in which the suppression is absolute are very rare.

The trouble may be caused by acute Bright's disease, by lowered pressure of the blood, or when the fluids are depleted by diarrhœa. The ureter of a healthy kidney may be obstructed by pressure, or calculi may block both ureters. Severe injuries, or an operation, or lead, turpentine or phosphorus poisoning may act as a cause. Patients have lived for ten days with complete suppression of the urine. One writer records recovery after a suppression of nineteen days.

Treatment should be given mainly to stimulate the spine at the tenth, eleventh and twelfth dorsal vertebræ. This may be extended from the sixth dorsal to the second lumbar vertebra. See Nos. 43, 44, 48, 51, 52.

Draw the muscles away from the spine, as in Nos. 31. Treat the abdomen in a thorough manner to draw the blood there and relieve congestion. See Nos. 94 to 100. The bowels should be kept open. The skin should be kept active by hot tub baths and hot packs. Hot salt water enemas should be taken.

ST. VITUS' DANCE.

(Chorea.)

Chorea is a disease characterized by an incoördinate movement and twitching of the muscles either local or general. There is often some slight psychical disturbance and great liability to endocarditis. About three-fourths of the cases are girls between the ages of five and seventeen. In many cases the disease is hereditary. Among the exciting causes may be mentioned fright, worry, grief, modern forced methods of education, eye diseases or weakness.

The Osteopath expects to find some anatomical lesions as a predisposing cause, the correction of which leads to the cure of the disease.

The symptoms manifested in chorea have such a wide range and are so varied in character that for convenience they are classified under three divisions in which the mild, severe and most severe or extreme cases are described. The disease generally attacks a hand with a jerky motion, then attacks the face, and later the legs. In the mild forms only the hand or hands and face are attacked. The child is restless, cries easily and often. There is headache and pains in the limbs. The patient loses the temper frequently and is easily frightened at night.

In the severe forms the trouble becomes more general in character. The speech is affected and the patient may be unable to dress and attend to

ordinary duties. The extreme form may develop into insanity.

Treatment. The disease yields most readily to osteopathic treatment. The lesions are usually in the upper dorsal and cervical regions. Muscular tissues are found in a tightened condition. Of course the first thing for the Osteopath to do as soon as possible is to remove the lesion. In addition, a thorough general treatment is indicated. See general treatment. Special attention should be given to the groups of muscles most affected. They should be thoroughly massaged, and the limb or arm, as the case may be, thoroughly manipulated. See Nos. 113, 114, 131. Treatment should be given daily until the patient is better, then three times per week and later twice per week. The cases ordinarily call for a long course of treatment.

Make sure that there are no intestinal worms, eye strain, sexual disorders, cause for worry, mental strain, overwork or severe muscular exertion. Attention should be given to the heart and bowels. See constipation. A soap suds enema may be used when necessary.

The Diet. Sweets and starches are better left alone, otherwise the patients may be encouraged to take as much nourishing food as they can digest. Meat, eggs, oysters, fish with plenty of green vegetables are recommended.

A warm bath on retiring and a cool sponge bath with a brisk rub on rising will be found to be beneficial.

DEEP BREATHING.

A great deal may be accomplished by the patient herself in regaining her health and in keeping it when it has been restored. The general health may be greatly benefited, and help thus gained will aid in overcoming special diseased conditions. It is well for the patient to secure all the oxygen possible. This acts as a food, the cheapest and best in the world, and it is a great blood purifier and tonic. While enjoying this medicine the muscles of the chest may be built up and its capactity greatly enlarged. Proper breathing will help. To do so properly you should be in a very well-ventilated room. Even in cold weather throw open the windows. Out of doors would be better. Have the clothing loose and all the muscles relaxed. Stand easily with the hands on the abdomen. Now take a full, deep breath slowly, allowing the abdomen to swell outward. Then exhale slowly forcing the abdomen in. The abdominal type of breathing brings into full play the diaphraghm, which increases the capacity of the chest and aids in expelling the air. It also strengthens the abdominal and pelvic organs. When you can breathe correctly in this manner (and it will take practice) you may inhale a long, deep breath, bringing the arms slowly from the sides until they meet over the head, at the same time rising on the tiptoes. Exhale slowly, bringing the arms back to the sides again. Do this several times per day, ten or fifteen minutes at a time, preferably in the open air. When you walk be sure that your breathing is correct.

STRENGTHENING THE MUSCLES OF THE PELVIC FLOOR

A woman may help in building up the tone of the muscles of the pelvic floor, which helps keep the uterus in its proper position, by standing, and while in that position, using a motion of the muscles about the rectum as if she were restraining the act of defecation. This should be performed for ten or fifteen minutes at intervals.

CONSTIPATION.

This is a very common trouble with all ages and both sexes, but is very prevalent among women, and as it aggravates many diseases peculiar to women we will consider its treatment here. It poisons the system and by undue pressure of the fecal mass against the soft tissues, interferes with the circulation in the pelvic organs and is a prolific cause of many diseases. Retention and hardness of feces, irregularity and insufficiency of bowel evacuation, are regarded as constipation.

This trouble may be caused by any one or any combination of the following: Lesions of the spine or ribs, affecting the blood or nerve supply of the bowels; poor peristaltic action, mechanical obstruction, impairment of quality or absence of bile, a flabby or pendulous condition of the abdominal walls and muscles, inattention to the calls of nature, dependence upon purgatives, improper diet, lack of exercise.

Treatment. The most important thing to do is to remove the real cause of the torpidity of the

bowels. The lower half of the spine will be generally found at fault. A common condition is a tension of the ligaments binding the vertebræ together, with a posterior condition of the lower dorsal and lumbar vertebræ. This affects the nerve supply to the bowels. This may be overcome by a thorough loosening up of these tightened conditions by manipulation, as in Nos. 43, 44, 48, 49, 51, 63. The entire muscular structures of the lower part of the back must be relaxed. See Nos. 64, 47, 53, 58. The lower ribs if down must be raised. See Nos. 90, 91, 92. The bowels should be thoroughly manipulated. See Nos. 94 to 100. Fecal obstructions may thus be loosened and passed along the intestinal tract. Some writers recommend rolling a cannon ball, wrapped in some suitable covering, over the intestines for five or ten minutes each morning and evening. All spinal lesions, of whatever nature, should be removed. See examination of the spine.

In a very elderly person, or where the abdominal walls are flabby and pendulous, a suitable abdominal belt should be worn until the tissues can be toned up by the osteopathic treatment. This will hold the contents from sagging and obstructing the general circulation of the pelvis.

Every one should have a regular time to go to stool, and those liable to suffer from constipation should let nothing interfere with this important duty. Many cases of fecal retention start from neglecting the calls of nature. When suffering from constipation go whether you feel the necessity or

not, and when you go do not be in a hurry, but expect a movement. Do not strain. It is very injurious for a woman to do so, and in either sex may cause piles.

Stop the use of purgatives, however simple and harmless they may be said to be. In using purgatives the doses must be increased, the drug must be changed for another, until it is almost impossible to secure an action. Nature grows dependent upon these and their use only confirms the condition and makes the cure all the more difficult.

Should the bowels prove a little obstinate to the above treatment, at first, use an enema, in which a tablespoonful of salt is used to a quart of water. Use a fountain syringe. Retain the water a half hour if you can, meanwhile massaging the bowel contents. This should not be done but every other day, and must not be continued long. Continued use of such a treatment weakens the tissues and stops the proper secretions.

Diet. The diet should receive special attention. Most people are accustomed to a too concentrated diet, in which there is too little to pass through the intestines to help excite the peristaltic action by friction on the nerve terminals. All of the following foods are splendid for constipation. A diet may be selected from them, and in case anything is known not to agree with the patient it may be omitted from the list: Tomatoes, lettuce, spinach, asparagus, beans, peas, corn, potatoes, cabbage, celery, boiled

Spanish onions, carrots, turnips, squash, pumpkin, and cauliflower.

Corn and Indian meal, oatmeal, shredded wheat, coarse graham bread, graham gems, bran bread and bran biscuits. The bran may be mixed with graham or white flour. The bran may also be eaten raw, as much as three or four tablespoons per day. Olive oil may be eaten on salads, lettuce and tomatoes. Use plenty of butter. All fruits with small seeds are excellent, such as figs, raspberries, blackberries, strawberries, grapes and huckleberries.

Grapefruit, cherries, prunes, oranges, pears, peaches and apples are all splendid. Some of the above may be stewed if the raw fruit disagrees.

English walnuts, butternuts, walnuts and almonds. Water, coffee, cider, grapejuice, buttermilk and sour milk are all desirable.

Foods to Avoid.

Fried foods, rich sauces and gravies, sweets, pastry, pickles, cheese, starchy puddings, tea, sour wine, red wine, eggs, milk, or any other highly concentrated foods.

Two glasses of water should be taken on rising in the morning. Drink plenty of water between meals and a glass or two on retiring. Water taken on an empty stomach is absorbed by that organ and goes through the portal circulation to the liver, where it performs a healthful work. If plain water disagrees, flavor it with lemon juice or a little spice.

A daily cold bath, followed by a vigorous rub until the skin is made to glow, is a useful adjunct.

If the patient follows a sedentary life, and is indoor much of the time, exercise is to be recommended, such as walking, horseback riding, tennis playing, bowling. etc.

DROPSY.

(Ascites, Renal Dropsy.)

Ascites is a dropsical condition of the abdomen, due to the accumulation of fluid in the peritoneal sac. It is generally caused by some other disease or diseases. It may follow diseases of the liver, heart, lungs, kidneys, or it may be secondary to la grippe, fever, etc. It may be caused by an obstruction of the portal circulation or to an abdominal tumor. We look for lesions in the spine, in the upper lumbar and lower dorsal regions, also among the ribs.

The treatment in general should be directed to the removal of the first cause, and in addition we should stimulate the kidneys. See treatment in Bright's disease.

It will be well to give a thorough general treatment. See general treatment. Special attention should be given to the upper dorsal region. Work here will stimulate the skin. Give a deep abdominal treatment. See Nos. 94, 95. Treat the solar plexus. See No. 100. Manipulate and treat the limbs as in Nos. 113, 114, 116. Work over the liver and keep the bowels active. See Nos. 93, 101, 102.

Renal Dropsy. This is an accumulation of fluid in cellular tissues and lymph spaces from the arteries and veins, and is caused by the failure of the kidneys to carry off the surplus fluid, as they fail to do in various kidney diseases. See acute and chronic Bright's disease. The main treatment is, of course, directed to the cure of the primary condition. Keep the kidneys well stimulated by treatment in the lower dorsal region. Give a thorough general treatment for the purpose of toning up all the tissues. This assists the general circulation and retards the flow of fluid out of the blood vessels into the lymph and other spaces.

ARTERIOSCLEROSIS.

(Atheroma.)

This disease is a thickening of the walls of the arteries, due to chronic inflammation of the inner coat (intima). It is often hereditary. Gout, syphilis, rheumatism, alcoholism, high and fast living act as exciting causes. This disease is often a forerunner of heart, liver, and Bright's disease and apoplexy. One great cause of this disease is overeating. We eat too much. We keep it up too long. I agree with George Cheyne, that every man after fifty, it would be well to begin at forty, ought to lessen the amount of his food, and every seven years after lessen it sensibly and gradually, and at last descend out of life as he ascended into it, even into the Child's Diet. He says that this would keep the faculties and senses clear and keep us free from great and dangerous distempers. He further says: "Milk and sweet, sound blood differ in nothing but color. Milk is blood."

Symptoms. They are obscure, but in many cases there is a hard, bounding pulse, difficult breathing, and insomnia. It generally appears after forty.

Treatment. A general osteopathic treatment is indicated. See general treatment. Stimulate between the second and fifth dorsal vertebræ. See Nos. 34, 38, 43. Raise the ribs. See Nos. 84, 86. Work over the liver. See Nos. 93, 101, 102. Give a thorough abdominal treatment. See Nos. 94, 95. Stimulate the solar plexus. See No. 100.

Diet. Let the meals be taken regularly. Drink plenty of water between meals. Leave alcohol alone. Use vegetables rather than meat. If there are renal symptoms, skimmed milk is a most excellent diet.

PHLEBITIS.

(Inflammation of Veins.)

This may be simple or it may be septic, or it may be septic with bacteria from some neighboring suppurative process. The veins are firm and painful to the touch, and are surrounded by inflamed tissue. There is swelling and pain, with some heat. There is stiffness of the limb. The skin is discolored. Pressure, without or with injury, may act as a cause for this disturbance. Often there is no history of violence or accident. Most simple cases occur in the lower limbs. Should it be in the pelvis, ear or portal vein, the condition is most grave and surgical assistance may be necessary.

Treatment. The patient must rest, sometimes for a month or six weeks. When the trouble is in the lower limbs the trouble is looked for at the eleventh dorsal and below this point, as far as the sacrum. Remove the lesions as far as possible and give stimulating treatment in the lower dorsal and lumbar regions. See Nos. 43, 44, 48, 51, 52. Rotate and manipulate the lower limb with great care, as in Nos. 113, 114.

Give slight torsion about ten times each way per

treatment, as in No. 121. Gently rub tissues of the limb in the direction of the heart.

Diet. The diet should be light. Keep the limb elevated as much as possible. Hot fomentations may be applied for a while. Some medical authorities advocate the use of lead water, used as a cold compress.

VARICOSE VEINS.

Varicose or enlarged veins are more common in the lower limbs. In general they are due to an obstruction to the return circulation. The condition may be partly caused by a diseased liver or heart, relaxed abdominal walls, and ptosis of the intestines. Constipation may help in increasing this disorder, as may a pregnant or misplaced uterus. The Osteopath looks for lesions in the lower dorsal and lumbar vertebræ, or in a slipped innominate bone which brings undue tension on some muscles and ligaments.

Treatment. In general this is a stimulating one in the lower dorsal and lumbar regions. See Nos. 43, 44, 48, 50, 51, 52. Manipulate the limb. See Nos. 113, 114, 121. Give abdominal treatment. See Nos. 94 to 100. Lift up abdominal contents. See Nos. 96, 97. If the heart or liver is involved, this calls for treatment for this special ailment. If constipated, see special treatment for that.

Some medical writers order salts to keep the bowels open and order an elastic stocking. Under osteopathic treatment the elastic stocking may be removed.

ANÆMIA.

(Secondary Anæmia, Toxic Anæmia.)

Anæmia is a term which is used to define any marked change in the blood, in the number of either white or red corpuscles, or in the amount of the hæmaglobin, or albumen. It may be used to denote a deficient quantity as well as quality of the blood.

Secondary anæmia refers to anæmia resulting from loss of blood, due to hemorrhage. Toxic anæmia is caused by the action of poisons on the blood, as mercury, arsenic, lead and the poisons of syphilis, malaria, etc. For treatment, see Progressive Pernicious Anæmia.

CHLOROSIS.

This is a disease that frequently affects girls, generally between fourteen and eighteen. The patient has a yellowish green tinge, from which the disease takes its name. The patient retains fat tissue and looks plump. At the onset of the disease there is a disposition to be quiet, with no desire for physical or mental activity. Palpitation of the heart and difficult breathing are evident on slight exertion. There is constipation, headache and vertigo. The menses are scanty or irregular or both. The appetite is poor. For treatment see Progressive Pernicious Anæmia.

PROGRESSIVE PERNICIOUS ANÆMIA.

This is usually defined as a grave disease of the blood, in which there is destruction of red corpus-

cles. The cause is unknown and the condition grows worse. There is pallor, shortness of breath, palpitation of the heart. The patient is tired. The white of the eyes is pearly. The pulse is large but soft. There is headache and vertigo. The food is repugnant. The skin assumes a lemon yellow color. The patient becomes more feeble and the flesh more soft and flabby, and the bed is soon taken. Fever is moderate. The tendency is towards paralysis. The ankles swell slightly. Under osteopathic treatment the procedure is about the same as in all cases of anæmia.

Treatment. The spine is to be carefully examined and all lesions are to be removed as fully as possible. The treatment is general. See general treatment. The treatments must be given lightly at first, and as the patient improves they may be given with more force and at greater intervals. At first the treatment should be given daily, later three times per week. This may be reduced to twice and once per week as the patient improves. The treatments should be continued for a long time. Keep the heart stimulated. See Nos. 34, 43, 7C. Constipation and headache should be treated as indicated as under those general heads.

Diet. Strict attention should be given to the diet. As the patient can handle it, good, nutritious food should be provided. See diet of tuberculosis. Let there be good ventilation. Out of door sleeping would be better. Take plenty of time for sleep. Keep regular hours. Exercise moderately. Give up

school for a time and avoid all social functions. Hot baths may be taken twice per week. Take a cold sponge bath, followed by brisk rubbing, each morning.

Medical Treatment. The bowels should be given attention and should be made to move daily. In chlorosis Blaud's pills are given, which contain two grains of the sulphate of iron. The pills are given in increasing doses. The first week one pill three times per day. The second week two pills three times per day. Third week three pills three times per day. This latter is kept up for three months.

In progressive pernicious anæmia arsenic in increasing doses is used. Three drops of Fowler's solution three times per day is increased to five drops at the end of the first week, ten at the end of the second week and fifteen the third week. Vomiting and diarrhœa are symptoms of an overdose.

Five to ten drops of dilute hydrochloric acid may be given, in all cases, in water, after each meal to aid digestion.

GOITER, SIMPLE.

(Big Neck. Bronchocele.)

This disease is an enlargement of a whole or a part of the thyroid gland. The causes of this disease have been variously given by different medical writers. Those given, however, are the exciting or secondary causes. The disease is much more frequent in women than in men. The goiter in-

creases in size at the menstrual period, and during each pregnancy it becomes larger. It is more prevalent in limestone regions and often hereditary.

The growth is painless, but may cause difficult breathing, difficult swallowing or loss of voice. It has caused sudden death by pressure on the vagi nerves.

The outlook under medical treatment is unfavorable, guardedly favorable as to life, but the disease is generally cured by osteopathic treatment. The real cause of the disease is an interference with the nerve and blood supply of this very vascular gland.

The neck should have the tissues thoroughly loosened, both front and back. See Nos. 1, 5, 6, 8B. 9, 10, 11. The cervical vertebræ should be lined up if found out of position. See Nos. 1, 3. The clavicles should be raised. See Nos. 72, 73. Depress the first rib. See Nos. 75, 76, 77. But little work should be done over the goiter, but it may be raised up gently at each treatment. See No. 8B. In many cases a general treatment will be helpful. See general treatment. Treatment may be given two or three times per week at first. When improvement is marked only once per week is indicated.

EXOPHTHALMIC GOITER.

(Graves' Disease. Basedow's Disease.)

This disease not only presents the large neck (thyroid gland), but there is a protrusion of the

eyeballs, a rapid heart, a peculiar muscular tremor. The pulse may be from 100 to 160. The breathing, on exertion, is difficult.

This disease often yields quite readily to Osteopathic treatment. The procedure is the same as for simple goiter (which see). In addition to this a thorough general treatment is to be recommended. See general treatment. A wet pack may be placed about the neck at night. The patient should avoid excitement and should rest in a reclining position a great deal.

TUMORS AND NODULES OF THE BREAST.

These are often caused by a misplaced rib or clavicle. Lifting heavy weights or any severe work will produce this. When cut, cauterized, bruised or irritated in any manner these innocent growths are very apt to become cancerous. See the treatment for clavicles, Nos. 72, 73. Examine the ribs carefully, look for twisted ribs and ribs that are luxated in such a manner as to be too close together, and treat as directed under treatment for ribs. Lift up the ribs, very carefully. See Nos. 81, 82, 86. Give the general treatment (which see). Many operations may be avoided in this way.

THE GREAT DANGER OF NEWLY-WEDDED WOMEN.

One great danger to which newly-wedded women are exposed is the contraction of gonorrhea from their mates. Of course their husbands believe themselves to be entirely cured of a case of gonorrhea which they had contracted, perhaps, years ago. But having had the disease they are innocent carriers of the germs, which, in many cases, are communicated to their innocent wives. These germs then become active in their new environment and begin their work of filthy destruction in new soil.

Have you not known healthy, strong, active young girls, after marriage to some young man, who had finished sowing his wild oats (as he thought), to lose their bright color, grow pale, weak and emaciated, and for years have very poor health? You have seen these women enter hospitals where their ovaries and other organs of generation were removed. You may have been told that the operation was for appendicitis, or was of a similar nature, for it is natural to want to cover these things up. But that operation is often not the last, and the innocent victim is not only doomed to a life of sterility but to chronic invalidism as well.

Her early death follows oftentimes. It is accompanied by long-drawn-out periods of torture, both mental and physical and the end is loathsome in the extreme. She has been sent to an early grave by one

whom she loved and trusted and who was supposed to protect her from all harm. In most cases the husband is entirely innocent of premeditated injury to his wife. He supposes himself to be entirely cured, but the latent germs have become active and accomplished their hellish work only too well.

Allow me to relate a case which illustrates my point. A. K. was a member of one of the oldest and best families of his community, and though a splendid young man was "one of the boys." While "sowing his wild oats" he contracted gonorrhea, which was supposedly cured. Entering a profession he was a leader in it, but was handicapped by a tendency to ill health which was difficult for his friends to understand, as they knew the vigorous stock from which he sprung. He married a beautiful and talented girl, who, after a while, went to the operating table, where her ovaries were removed and her health was shattered. He was claimed by death at the age of forty, having a trivial ailment which most persons would have survived. The microscope showed the attenuated or latent virus of the boyhood gonorrhea, which had unsexed a mother and had accomplished its horrible mission of death after these many years.

It is claimed that eighty per cent of pelvic operations that are performed on the women of our land are on account of venereal infections. There are other countless thousands who suffer in silence and who are the prey of quacks, medical and otherwise, who are worse than ghouls. Venereal diseases are also responsible for the large increase in insanity in our country and

are often a forerunner by many years of locomotor ataxia and paresis.

The reason that this disease is so difficult successfully to treat in women is that the germs travel where drugs are incapable of following, and drugless treatment is not effective in killing the germs, which become so well established in their new centers or nests that any ordinary means fails to dislodge them.

The way to overcome the horrors of the after-effects of gonorrhea in the home would be for every man to be compelled to take a bacteriological examination before he secures a marriage license, and if found to be infected secure competent treatment until radically cured. This would insure more happy homes, less disease and more progeny from the best blood which the old world needs. The reason for such an examination will be apparent when we are told that four out of every five adult men have been infected at some time.

The two great venereal diseases, which every newly-wedded woman should be protected against, are syphilis and gonorrhea. The former of these, syphilis, is not curable. Every once in a while some one in the medical profession claims to have discovered a cure for this "king" of diseases, but the claim has proven unfounded again and again. The symptoms may not amount to very much at first, and they may be overcome by drug medication. But they will appear in another and worse form after awhile. All may have the contagion at any age, and you may rest assured that if you once have it you will have something that will al-

ways stay with you, and that you will transmit to your children and grandchildren. When you acquire syphilis you may expect to have the disease extend over a series of years and run through four stages. There will be the primary lesion, which comes as a sore, which is small and red, but gradually enlarges and breaks in the center, becoming a small ulcer. These continue about three months, when the constitutional symptoms assert themselves. These vary greatly. There may be a fever that resembles typhoid or malaria. There may be anaemia accompanied by a muddy complexion. Reddish-brown spots may occur on the trunk and arms, or there may be a rash that resembles smallpox. These lesions may occur at intervals lasting over ten years. At the corners of the mouth, in the groins, under the arms, between the toes, there will be patches covered with a gray-looking secretion. Persons with this disease are subject to eye, ear, liver and kidney diseases. In the third stage the ulcers continue; they are worse and leave a scar in healing. Gummata appear in the various organs of the body, which have a tendency to break down and form a sore, leaving a diseased condition of whatever organ it may affect. If the patient lives, there may appear, a number of years afterward, as a result of the poison, locomotor ataxia, or insanity, or some form of paralysis. The brain, spinal cord, heart, in fact every tissue of the body, may at one time or another be affected by this terrible disease. It is a cause of many of the hard, chronic cases that every physician has to deal with, and if syphilis were a thing of

the past, with its attendant horrors, they would have much less work to do. Not that they treat active cases of syphilis so much, but they are kept busy treating people of eminent respectability and position, who are ill as a result of syphilis which they had years ago and which they supposed was cured at the time; or it is syphilis that has been transmitted to them by their parents and which, if they have any offspring, will be handed down to them. A person who has pure blood transmitted to him by his parents has much to be thankful for. He has something far better than wealth and is in a condition to enjoy the blessings of life. He should be very careful that his children are allowed the same pure, healthy blood. If you have this dreadful disease you must remember that it is "in the blood" and that you can not be cured by putting on something or by taking medicine for several months.

Do not put yourself under the treatment of a "quack" or so-called specialist, but go to some well-known physician in your own town and let him treat you for two or three years. He knows all there is to be known about your disease. No one has anything newer than he has got that is any good. He will know just how to apply strong remedies so that they will do the most good in your case. If you seem to be well and want to quit treatment let your doctor be the judge by all means, as he is dealing with a very desperate and deceitful disease.

While you are under treatment, during the first year, you should not indulge in sexual intercourse. You

should sleep alone. All toilet articles, towels, brushes and shaving utensils should be used by yourself and no one else. Avoid kissing any one. Brush your teeth three times a day. Do not let any one handle anything you have had in your mouth. Do not use a public drinking cup. You should not marry for three years after you have contracted the disease, and only then after you have undergone a very thorough and protracted treatment. In fact, the State should care for such cases. They should be reported and should be dealt with as strictly as smallpox or any other disease of like nature.

Syphilis in infants is much worse than with adults. When it is hereditary they have been poisoned from the very beginning of their existence, and the very bony framework of their structure has been changed. About fifty per cent of them die very early, and quite a number never see the light of day. In some public institutions the mortality rate is much higher, reaching the appalling height of seventy per cent. So we see that at the very threshold of life there is a great and terrible danger to those who enter families in which there is the blood taint of syphilis. Another danger that they run is in acquiring the disease. While the number of these is not so great as those who inherit the disease, there are still quite a number of them; and many who are said to have a case of "late hereditary syphilis" have acquired the disease because of the carelessness of others. They may get the infection by the kiss of another syphilitic child or older person, or by using the playthings of one who has the disease.

They may acquire it from servants, nurses, parents; and even a careless physician has been known to spread the disease. It is not so terrible as the hereditary form, as it has not commenced its work until the child has had an opportunity to develop some. Yet it should receive a very thorough course of treatment. Those children who are not aborted or born dead as a result of the disease may have a very severe infection and die in a few days. Others may appear to be healthy, yet the symptoms appear in from one to eight weeks. If no symptoms appear for three months the child may be considered safe. The symptoms at first are similar to a cold in the head. It is catarrhal in nature and very severe and persistent. There is blood in the discharge and thick crusts form. The child breathes through the mouth and finds it very hard to nurse. Its cry is hoarse. The child's early teeth decay rapidly and the second set have a notch in the cutting edge. Later the bridge of the nose may have a tendency to fall in. The child may have eye and ear trouble, a saber-like deformity of the tibia or shin bone, enlargement of the spleen and other glands.

The best and easiest way to avoid this trouble is for a person who has syphilis never to marry. But the best way is to be clean and never acquire the disease. It would be well, if you are a young woman, to be absolutely sure that your intended has never had syphilis, and so avoid the possibility of going through a living "hell" on earth. There have been efforts made in various States to pass laws requiring the registration of venereal diseases. This would be desirable, as it

would be easier to avoid. But it has not been possible to have such legislation enacted. There should be compulsory examination of all who intend to enter the marriage relation.

THE CLIMACTERIC.

A very trying and usually a very dangerous time for women to pass through is about the age of forty-five, though this may vary considerably. It may be as early as thirty-five with some and as late as over fifty in others. When a woman is strong sexually she begins to menstruate early in life and continues to do so until much later in life than one who is weaker. If you are in a good, healthy condition you may not fear the change of life, for we have known such persons to go through with it and hardly know the difference. But if you are subject to organic disease it will be apt to show its full effect at that period of life, for the vitality with which we begin life and which we have added to or spent as the case may be, is diminishing from natural causes and we have but little to draw upon, and so the organic disease, whatever it may be, gets the upper hand.

The change of life lasts with most women from one to two years; sometimes it drags along several years and may last for five or ten years. Wasting disease bring on an early change and it is continued longer. Either physical or mental shock, which unfits a woman for childbearing, does the same, and chronic inflammation of the uterus predisposes to an early change of life, which is fraught with various disturbances.

The changes that take place are due to the ovaries ceasing their functions. This causes the uterus to be-

come small and hard. The vagina becomes pale and shorter and smooth. The sexual feelings are gradually lost; the breasts usually become smaller and flatter, but in case the size is retained the glandular parts are replaced with fat. About eighty per cent of such women become obese, but in some there is a loss of flesh. There is a tendency to cancer and other malignant growths at this time.

The first symptom of the approach of this change of life is irregular menstruation. It is usually delayed, coming on at the fifth or sixth week, or it may come at any time. The amount of blood passed varies, sometimes less, sometimes more, but it is generally the latter, and frequently amounts to a hemorrhage. There are times when the flow is so great as to threaten the life of the patient, when we should suspect a cancer. The flow is also prolonged, lasting at times for from seven to ten days, and in a few cases for as many weeks. But this is an abnormal condition and we should be on the lookout for a case of malignant disease. Frequently there is a cessation of the menses for several months, but coming on again after an exertion. Should they have stopped suddenly from any unnatural cause, such as a cold, the person will not feel well until they again appear.

There are also reflex symptoms of a varying nature accompanying the menopause: palpitation and slowness of the heart, also difficult breathing. There are hot and cold flashes. With some they occur about every hour. It feels as if the blood were leaving the body, when they suddenly feel the blood rushing over the up-

per part of the body, and the face becomes very red and the heart is apt to beat very hard. The eyesight is affected and there is a roaring in the ears. A part of the body, usually an arm, feels numb, and the sleep is disturbed. Piles, if any, are given to bleeding very much at this time and the mucous membranes of the body are congested, resulting in a catarrhal condition. Insanity may be the trouble in some cases and a marked hysteria in others, and in some the whole disposition is changed.

While cancer of the uterus and breast is liable to begin at this time, the menopause cures a great many other diseases, so that some women are better in health than they were before this took place. Ovaries which caused a great deal of pain do so no longer. Painful and difficult menstruation has passed and various inflammatory conditions cease. A woman who may be contemplating an operation for tumors about this time should wait, by all means, until after the menopause, for they often disappear entirely on account of lack of nourishment. Goodal, the gynecologist, says that in his practice over forty tumors of a stony hardness were entirely absorbed.

Treatment. We do not expect to cure these disturbances, but much may be done to relieve such conditions by following the treatments outlined in the second part of this book. For too profuse and prolonged menstruation, the patient should take to bed; if not convenient to do this, keep off the feet, as walking tends to congest the uterus. When the patient wishes the flow to cease and when it is causing weakness the

foot of the bed should be made higher than the head. She should be kept quiet, both mentally and physically, for worry tends to make the disease worse. The object in treatment is to get the uterus to contract, and we may do this by stimulating the nerves that go to it, which may be accomplished by strong manipulation in the lumbar and sacral regions of the back. See Nos. 57, 58, 59, 60, 64, 65, 66, 68, 69, 47, 48, 49, 50, 52, 43, 44. You may use deep, circular massage over the uterus. Something hot or cold placed on the lower part of the abdomen will shock the patient and produce a contraction of the uterus, as will a sudden jerk of the hair on the mons Veneris. A good slapping of the buttocks, taking the patient by surprise, will also produce the same results. For the nervous system use the treatment outlined here. The patient lies reclining on the side. The tissues of the back are loosened, as indicated in Nos. 53, 56, 58. The shoulder is manipulated as in 54, 55, and the lower limb is massaged while in this position. The spine is sprung from one end to the other, as in No. 57. The patient takes the reclining position and further treatment is given the back as in Nos. 47, 48, 50, 51, 52.

Afterward the patient lies on the back and the treatment is given on the head as in Nos. 14, 15. The neck is treated as in Nos. 7B, 9, 10, 11, 13. The arms are given a pretty thorough massage. Further treatment is given the back and the ribs are raised as in Nos. 61, 62, 64, 86. The abdomen is treated as in Nos. 94, 95, 96, 100, 101, 102. The lower limbs are further massaged and flexed with pressure on the abdomen.

The patient now sits and the back and spine are further treated as in Nos. 1, 2, 5, 34, 36, 37, 43, 44.

For the heart difficulty, when there is a rapid pulse and it is perceptible to the patient, the left hand may be held above the head and a steady pressure be brought to bear on the second to fourth spinal dorsal vertebra. Continue this for five or ten minutes. See No. 67. Raise the ribs. See Nos. 82, 86, 87. Give a deep, inhibitive abdominal treatment for the purpose of relaxing the caliber of the abdominal vessels and drawing the blood there, thus quieting the heart's action. See Nos. 94, 95, 100. Stimulate the pneumogastric nerve. See No. 7. Raise the clavicle. See Nos. 72, 73. Apply an ice bag over the heart. Should the atlas or axis be out of position, correct. See Nos. 1, 3. Loosen the upper spinal muscles. See Nos. 34, 43, 53. This treatment may be given about three times per week.

Women at this time of life are subject to tumors and nodules of the breast, which are often mistaken for cancer, but are innocent tumors caused by an obstruction to the circulation on account of a misplaced rib or clavicle. See treatment for clavicles. Nos. 72, 73. Examine the ribs carefuly, look for twisted ribs and ribs that are luxated in such a manner as to be too close together, and treat as directed under treatment for ribs in the second part of this book. Lift up the ribs. See Nos. 81, 82, 86, and treat as before mentioned for nervous symptoms. Many operations may be avoided in this manner.

Obesity is a trouble that comes at this time of life,

that is not only a great inconvenience but may seriously impair the health. The fat infiltrates the heart muscles and greatly weakens them; also the lungs, liver, kidneys and blood vessels. The controlling factors that cause this trouble may be heredity, bad habits of eating and drinking, lack of exercise, and spinal lesions that interfere with the proper working of the liver, pancreas, and lymphatic system.

This condition must not be overcome too suddenly, but remove all lesions as soon as possible. The clavicles are to be raised and the first ribs lowered. See Nos. 72, 73, 75, 76. A thorough spinal treatment should be given for the stimulation of the liver, pancreas and kidneys. See Nos. 32, 43, 57. Give a vigorous treatment over the fat, as this tends to absorption. Give the treatment before outlined for nervousness.

The diet should be greatly restricted. Starches, fats, and sweets are to be eliminated as much as possible. The use of water is to be restricted, and alcoholic drinks are to be prohibited. Regular exercise must be taken. If the heart is weak begin moderately and gradually increase the exercise. Walking is very beneficial. A sample diet list follows. It is known as Erbstiens.' He allows three meals per day. Breakfast will consist of a cup of black tea without sugar or milk. Also two ounces of buttered toast. For dinner one would have a meat soup, four to six ounces of fat beef, roasted, or fat beef with gravy, but not thickened; a small portion of two fresh vegetables, and for dessert, salads and fresh or dried fruit; tea without milk.

Supper, an egg with an ounce of buttered toast, some cold fat meat and some fruit. The water taken is restricted. All drugs taken as anti-fat remedies are dangerous.

A person who is going through this period of life should be as contented as possible. Look for the bright side of everything. Be happy and cheerful. It may require an effort, but a peaceful mind means a great deal for these conditions. Be out of doors as much as possible and have your sleeping rooms well aired. Fresh air and sunshine will be very helpful. Seek the company of young people and take an interest in them and their pleasures. We have known women who were in poor condition during this time to be better after the ordeal than they were before, and to enjoy life as they never had.

YOUNG CHILDREN.

The first and second years of a child's life are the most prolific of dangers, and the greatest one to which they are subject is that of the various diarrhœas. The extreme susceptibility of that early age is shown by a record kept in New York city, where the deaths from this disease with children under two years of age exceeded the number of those of all ages who died of measles, scarlet fever, whooping cough, typhoid fever and diphtheria.

One reason for this is that the intestinal tract has great demands upon it for the needs of the developing body, and its mucous membrane is so delicate that it is constantly exposed to various forms of irritation and to different infections. The trouble is very largely increased in the summer months, the extreme heat of which has a very devitalizing effect on the children. It is shown that this acts independently of other causes, because the diarrhœas occur everywhere in the temperate zone among all classes of children.

To overcome the liability to these diseases one should keep their clothing and bodies perfectly clean. Flies should be kept away from them and their food, as they are great carriers of germs which produce disease; and anything which lowers the vitality of the children increases the liability to diarrhœa. For this reason they should have sufficient rest and plenty of

fresh air. If they are dwellers in the city let them spend the warmer months in the country. A day at a time will be better than no time at all. The milk from the mother is the best, and if this is impossible, milk which has been properly prepared should be given at regular intervals.

There may be several other causes for this trouble, one or more of which may be present: (1) Indigestible, overripe or green fruit. (2) Sudden changes in the weather temperature. (3) Poisons generated in the food, as in milk or ice cream. (4) Nervous symptoms resulting from the emotions, as fright. (5) Various diseases, as cholera, typhoid fever, tuberculosis, etc. (6) Predisposing causes, as anatomical derangements of the spine.

Treatment. If the disease arises from either of the first three causes enumerated above, a dose of castor oil, followed by an enema, is indicated. This should be followed by a relaxation of all the tissues of the spine and back. See paragraphs Nos. 34, 36, 43, 48, 57, 58. In the case of young children the temperature should be regulated with water; if too high, by baths; if too low, by hot water bags. The bath for reducing fever should last for ten or twenty minutes and should be given often. An ice cap may be applied to the head. The pain and colic may be relieved by strong continuous pressure above the small of the back. See paragraph No. 67. The child may be lifted well off the bed by clasping the hands beneath the back where we desire the pressure to be made. Hold for a minute or two. Pressure above the sacrum

will stop cramps in the legs. An ice bag applied there and to the lower lumbar regions of the spine will do the same.

DANGERS OF PUBERTY.

(Boys.)

Boys from fourteen years of age and upward are exposed to a peculiar danger. This is because they then attain sexual maturity, or what is known as puberty, which is accompanied by many changes in different parts of the body. Hair is now to be found growing on the pubes and genital organs, and it is more abundant under the armpits. The boy's shoulders broaden and his voice becomes deeper. His larynx grows perceptibly larger, as well as the organs of reproduction. These organs of reproduction become physiologically active. Erections of the penis occur and seminal fluid is secreted in the glands. As these changes take place he may have voluptuous dreams and with them involuntary seminal emissions. As some prominent writers would view this subject these emissions, if not unnaturally provoked, are not injurious or harmful, but are entirely physiological and natural within certain limits.

Quack advertisers make much of this, and knowing that many young men know but little of this subject, and in many instances are too bashful to speak of it to those who know, they try to alarm them as much as possible and persuade them to take treatment. We have seen statements from them to the effect that such young men were in danger of idiocy and impotence;

that they would grow weak and nervous and that the organs of reproduction would grow very much smaller. They tell us that a seminal emission is equal to forty times the amount of blood drawn direct from the heart. They picture it as bad as they possibly can in order that the young men may be drawn into their net, and when there they will "bleed" them as much as possible and keep them in their toils as long as they can.

This can not be considered other than natural unless it occurs too frequently, when you should consult your family physician. You may diminish their frequency by bathing the parts in cool water, by sleeping in a bed that is hard and not too warm. You should not eat stimulating food and should avoid condiments. Do not overeat. Avoid the reading of impure books and literature and keep good company. Be much in the open air and take plenty of exercise. Do not think of sexual matters. It may be that there are anatomical misplacements of the lower spine which irritate the nerves that supply the sexual organs, and if so they should be corrected. They may be inhibited by using treatment, paragraph number 67.

DANGERS OF MEN OVER FORTY.

There is a danger to which men about forty years of age or over are liable, and which will carry them off with but little warning and in many cases with none at all. The danger to which I refer is arterio-sclerosis, and is commonly spoken of as hardening of the arteries. It is sometimes called degeneration of the blood vessels.

When over the age of forty it is well not to do anything requiring severe physical exertion. Do not run for a street car, as you will be apt to rupture one of the blood vessels if they are at all weakened. The cerebral arteries of the brain are sometimes broken and often cause instant death, and in many other cases result in paralysis of one entire side on account of blood pressure on the brain. Any artery may be ruptured, and it is my purpose to give such directions as will reduce the danger to the minimum.

Long life is largely a vascular question, and it has been well expressed by an axiom: "A man is only as old as his arteries." To a vast majority of men death comes through this gateway. Among the causes may be mentioned:

The High Pressure of Modern Life. There are many men who have attained the age of over forty years who have not done many of the things that ordinarily lead to this trouble. They have been temperate in eating and drinking; they have not contracted any

venereal diseases; they have not had gout, but nevertheless they have arterio-sclerosis, which has come as a result of high pressure of living. They have been at a high tension attending to business all day, with its keen competition, and at its close, after a strenuous time getting home, have only time to effect a change of clothes, when they are doing the society act and do not retire until late, not taking sufficient time for needed rest. They find themselves at last with some form of kidney trouble or with hardened arteries.

Overeating is another cause of hard arteries. There are many cases of that trouble for which there are no other causes. Men really dig their graves with their teeth. We may harm ourselves by being intemperate in our eating as well as partaking of intoxicating liquors. We need the advice of that old-time physician, Dr. George Cheyne, who said: "Every wise man, after fifty, ought to begin to lessen at least the quantity of his aliment, and if he would continue free of great and dangerous distempers and preserve his senses and faculties clear to the last he ought, every seven years, to go on abating gradually and sensibly, and at last descend out of life as he ascended into it, even into the child's diet."

This advice, if followed, would ward off a number of diseases, including stomach troubles, obesity and kidney diseases.

Chronic Alcoholism, gout and lead poisoning are also important factors in causing this disease. They change the quality of the blood and this in turn affects the arteries. They also set up renal changes which

affect the blood and arteries as well. In most persons alcohol conserves the fat, and this infiltrates in the walls of the blood vessels and weakens them, allowing the blood to force its way through.

Prolonged Muscular Exertion is a cause. This hardens the arteries by raising the peripheral resistance, thereby increasing the blood pressure, which gradually weakens the arteries.

I will now speak of undue **blood pressure** in the brain as a cause of apoplexy and give my reasons and the remedy for this condition. The brain is a great storehouse of energy and nerve force. From it emanate thousands of nerve fibers, controlling every function of the body. This great work on the part of the brain requires an enormous amount of nutrition and elimination. Especially is this the case when the man is a brain worker. This brain nourishment is conveyed through the arteries, veins, capillaries, lymphatics and serous channels which reach the head through the neck. We find surrounding the neck vertebræ more than thirty muscles, together with ligaments.

In and between these muscles lie the arteries and veins that convey the blood to and from the brain. The blood is pumped under direct pressure of the heart through the heavy walls of the arteries. But the return blood through the veins, which have soft, flabby walls, is under light pressure and may be held back by obstructions in the neck until undue pressure is exerted by the blood of the brain. This pressure often results in the rupture of capillaries, which means sudden death or apoplexy and paralysis, depending on the

amount of blood escaping into the brain tissue. In young persons the capillaries are more elastic and will not rupture as with older persons.

When there is normal relaxation of the muscles of the neck there is normal circulation to and from the brain. When there is maladjustment of the vertebræ of the neck, pinching the nerves and contracting the muscles, the return flow from the brain is impeded, while the heart is still forcing the blood under increasing pressure through the arteries to the brain. This causes heavy, expanding pressure in the capillaries of the brain tissue. The blood can not return fast enough through the veins on account of interference in the neck. The pressure rises higher and the capillaries break, the oozing blood forms a clot and apoplexy is the result. Overexertion, a little excitement, brings on the attack without the least warning.

Prevention is the only remedy, and the best way to apply this is properly to relax the neck muscles and keep them free from all contractions, and the vertebræ from all maladjustments. This may be done by giving the proper treatment, which is as follows: Follow paragraphs 1, 3, 5, 9, 11, and 13 in the second part of this book. Also use inhibitive pressure on the abdomen as in paragraphs 94 and 100. This tends to draw the blood there and away from the head.

HOW TO SECURE A MALE OR A FEMALE CHILD.

(The Determination of Sex.)

Before treating this important subject it will be well to understand something of the minute structure of the ovaries and how they perform their functions. Each ovary is made up of an outer and an inner part, called the cortical and medullary substances. The cortical substance, or outer part, is formed of columnar epithelium, a layer named albuginea, and under this a layer of the parenchyma. The medullary portion is very vascular and is made up of very loose connective tissue and unstriped muscle fiber.

In the cortical portion are found the Graafian follicles. These follicles contain the ova, or human eggs, just large enough to be seen by the naked eye. These follicles gradually work their way to the surface of the ovary and bursting there at the menstrual time allow the ovum to escape and find its way into the Fallopian tube, thence into the uterus. In discharging the ovum in this manner the ovary is left with a scar on its surface, by means of which we have one way of proving that the ovaries take turns in performing their functions, which allows each one to ovulate every two months. The ovum comes first from the right ovary and then from the left. This is also known to be a fact because a woman suffering from a painful affection of an ovary at the menstrual period has the pain

and distressing trouble only every two months. Again in some cases pain occurs in the mammary gland on the same side that contains the ovary which is ovulating, and this pain changes from one side to the other every month. Gynecologists have noticed that first one ovary becomes larger and then the other, at each successive menstrual period. This is on account of the ovary bursting at the surface to release the ovum. In operations and autopsies one ovary is found ready to discharge its ovum while the other ovary is preparing for that function. In women who were known to have menstruated a certain number of times, say forty, there would be found twenty scars on each ovary, proving that each one had furnished an ovum every two months. In the cases where women have a double uterus and a double vagina we find that the menses come first from one side and then from the other side on alternate months. These facts have occurred over and over again, proving that each ovary throws off an ovum every two months.

The ova are thrown off from the ovary with the sex already determined. The right ovary producing male eggs and the left ovary female eggs. This is proven in a variety of ways. When for any cause one ovary is removed the other produces eggs of but one sex. This has occurred in a number of instances. When the left ovary was removed none but male children were born, and when the right one was removed none but female children were born. When there exists a cause for sterility on either side we expect but one sex in the children.

The husband in no case has any effect on the sex of a child. All that the male does is to impregnate the ovum. There are a number of cases on record where a woman having been married twice has had only children of one sex. There are also a number of cases where men, having been married two or three times, by the first wife would have all boys, and from the union with the second wife only girls would be the result, and as a result of a third union there would be boys alone.

As the spermatozoid from the male is capable of living for weeks in the Fallopian tubes of the female, it has been said that the woman may help to control the sex of the unborn child by lying on one side or the other for some hours, and thus influence the spermatozoid to enter the desired tube, where it will be met by an ovum of the sex she wishes for.

When the menstrual period is regular and lasts for a certain number of regular days, and a boy or girl has been previously born, and it is known when the menses appeared after such a confinement, such parents may determine the sex of a child yet unborn. They may also determine the sex of all future children born to them. Always remember that there are thirteen menstrual periods or ovulations per year, and when a boy is born in January, a girl may be expected, if a child is born, on the following January, or a boy in February.

HOW TO HELP MEN RESPECT MARRIAGE VOWS.

It is a well-known fact that there is a great deal of marital unrest and unhappiness. The divorce court is being appealed to, marriage vows are annulled and many homes are wrecked. There seems to be a growing disregard for the sanctity of the marriage relation, more particularly on the part of men who have reached the age of forty. May there not be some great natural law that is being violated? Are these men wholly to blame for their shortcomings? False ideals on the part of many wives are greatly responsible. They regard the manifestation and gratification of the sexual desire as immodest and highly unbecoming to their sex. Sexual desire has been suppressed in their lives for generations, and in some cases has been so pronounced as to be inherited by their male descendants, who have been impotent and have an aversion for the sexual act. Women are still repressing sexual feelings as their mothers did before them. This is developing into heredities and rapidly fitting women to live a false standard. It is the normal thing for women to have sexual desires and they should cultivate them instead of repressing them. When women reach the menopause, or change of life, their sexual appetite decreases naturally, as the sexual organs atrophy and become less active. If this desire were to be cultivated as these later years approach there would not be

such a wasting in the sexual organs and the woman would be better fitted for her duties as a wife. As it is most women take less and less interest in sexual affairs after the menopause and many are filled with repugnance at thought of the sexual relation. They suffer the act, but take no active part in it, and are glad when it is finished. Normally, sexual power and desire should be equal in the sexes. Both should strive to minister to the other, and unless there is mutual pleasure in the act neither is fully satisfied.

A lady, sometime ago, asked of a physician why it was that so many men live clean, moral lives until they pass the divide, and then when they start down the other side their moral life goes the downward way at the same time. This physician happened to know that her husband, who was a prominent man in the community, whose life had been of the average, a pretty good man, had lately taken to associating with certain of the lewder, "fast" women of the town, and had been so open in his relations with them that even the older boys had recognized the condition, and his intimates were wondering how soon he would carry a cane to ease an unexplained sprain. The doctor surmised that she understood conditions and asked whether she wanted him to speak in general platitudes or to be brutally frank and explicit. On expressing her desire for a full explanation he told her that false ideals were at the bottom of all this misery, which is far more common than is generally believed. He told her that man's sexual powers seemed to wane when they were about forty years of age, as it is much more difficult to

obtain satisfaction without full coöperation, and being met with apathy and indifference on the part of the wife, when he mostly needed her ministrations of the nuptial contract, he naturally would be tempted to seek fresh pastures.

This conversation is so apt on this subject that we will reproduce a part of it here. She interrupted him by saying: "You are like all the men. You hark back to Adam and try to throw all the blame onto the woman's shoulders."

She was a notable housewife; her linen was the most dainty; her silver and china irreproachable, and her menus ever gave some pleasant surprise to her many guests.

The doctor said to her: "You are noted for the elegance of your table. Suppose that your husband should come home weary and hungry and you should go to the pantry and snatch a handful of this, that and the other, throwing all pellmell into a pan, and after pouring coffee over the mess, you were to slam the pan onto the table with the remark 'There's your supper,' or were to say to him, 'If you want anything, go the pantry and help yourself.' If you were to do this how long do you suppose your home would remain harmonious?"

"Why, he'd have me before an insanity commission," was her wondering answer.

"You would not blame him if he were to eat at a hotel or restaurant?"

"Indeed, no; but I don't comprehend what you mean."

Then the doctor told her that there are two great appetites which rule the world: the food desire, which preserves the individual, and the sex hunger, which perpetuates the race. Both are proper as well as necessary. The evolution of our civilization has placed the former on a high, esthetic plane, and relegated the other to an unmentionable degradation. And there is so much false modesty and prudery manifested with this subject that one has to be extremely careful in writing about it for fear of offending some one. There is a God-given sacrament, marriage, which is at the basis of the home, upon which our life system is built, and yet the sexual relationship, which was designed for the procreation of our descendants, must not be discussed. It is not nice to talk about or even to think of.

The doctor then told the lady: "The wife who probably all through her married life has failed in her nuptial duty to her spouse, when his danger period appears, becomes more lax. When he most needs her ministrations to protect him from himself, then she sets his nuptial table with scanty, cold scraps, or with absolute passivity; suffers him, perhaps with expressions of loathing, to 'help himself.'"

"What should she do?"

The doctor answered that the courtesan presented every possible blandishment and charm that nature and art may teach her to cater to her business, precisely as the hotel serves food in an enticing manner,

and the true wife should keep her husband by the exercise of the same care in feeding one appetite as the other.

She became indignant. "You would have the respectable woman resort to the wiles of the strumpet?"

"Indeed, yes; eliminating the brute grossness, and adding all that womanliness may be or know."

The act, controlled and pure, actuated by love rather than by brute passion, is the purest, sweetest and loveliest relation known to mankind, and should be approached with reverential attitude, and the determination of both that it shall be full to completeness and perfection.

After her duty was fully explained the doctor was much gratified to note, ere long, that her husband no longer consorted with lewd women.

This doctor's prescription was one that will commend itself to the person who does not believe in drugs. It was advice that saved a home; it removed an atrophy of function and established a physiological action of certain organs; hence it fell within a proper scope of his practice.

The sexual act may be bestialized in precisely the same manner as the food appetite. Contrast the savage, striking down his victim, and rending with teeth and nails, with the courteous gentlemen, with all the refinements of society, as he partakes of an elaborate banquet, while music and flowers and soulful companionship add to the delights of the repast.

As a race we have developed to the utmost the amenities of the table, while in the main we have

relegated the more important function to ignominious disregard as something "not nice to discuss."

With many men the traditions of the ages, which caged the woman in a harem and regarded her as the mere passive agent of their lusts, still remain; indeed, the conventional double standard of today is but the physical barrier replacing the cruder bars of the harem. This is the theory which tacitly winks at immorality of the man, and utterly condemns his sister for a suspicion of lapse from the walks of virtue.

Very few of those who enter the marital relation have the proper conception of the manner of procedure, or accomplishment or purpose of the sexual act, and their ignorance leaves them to pass through life with no more of the esthetic and humanizing element of the relation than the savage who greedily rends his food.

The pair should approach the nuptial altar with a clear, full idea that the act is perfectly proper, free from grossness and animalism. Each should come filled with a desire to minister to the other. This accords with the priest of old, who, ere, approaching the altar, purified himself and garbed himself in spotless garments, typical of his mental and spiritual attitude.

The act should be leisurely performed, and the same calm decorum should be maintained as at the table when the other appetite is appeased. There should be no undue haste, and the entire process should be characterized by gentleness and considerateness.

On the other hand, where the act is performed violently and precipitately, it leaves a sense of irritation

and desire that will demand further and further appeasing and fails to satisfy. This violence, with its resulting excesses, is one of the principal causes of "lost manhood." The man has simply burned out and exhausted his batteries. A man who has learned to perform this act properly, and who can approach it in the true attitude, is thoroughly protected in the walk of sexual purity and virtue. Having learned the ethics and practice of such a plan as I have here described, the wiles of the common drab no more tempt him than do the female animals in the barnyard.

The element of reciprocal love is as necessary to the enjoyment and satisfaction of the act as is the other party to the act. Without this element it becomes but little better than an act of masturbation. Under proper conditions the sexuality of the two sexes should be, and I believe is, properly balanced.

From what has been said here about this sacred relation any woman who has been remiss in her duty to her conjugal partner can, if she desires, rectify the mistake and build her house, not upon the sands, but upon the rock. The knowledge and practice of sane and scientific methods would cement many a broken home, heal many an aching heart. In every community many homes are found in which conditions are not what they were in the Garden of Eden, because of ignorance and carelessness of the sexual relationship therein. Proper instruction could remedy many of the ills of many such places.

THE LAXUS-CYCLE.

The object of the following pages is for the purpose of instructing patients to treat and cure themselves. A great part of the treatment may be taken at home and an occasional visit to the office of a doctor to treat special lesions which may exist. This mode of procedure will be found very helpful in chronic cases which require a long and patient course of treatment. Again, there are those who, being well, desire to keep themselves in the highest state of physical well-being.

Doctors recognize the great fact that abnormality of structure is often the cause of disease. This abnormality may consist in misplaced vertebræ or viscera, in contractions of the muscles or ligaments and, in fact, any deviation from the normal, either in contraction or misplacement of any organ or tissue. Most of these deviations are found in the spine and are the most prolific cause of disease on account of the situation of the spinal cord, the great central trunk of the nervous system.

It will be found that the Laxus-Cycle will correct deviations from the normal in the spine, such as contractions, curvatures, anterior or posterior displacements, and can be used for making pliable all the tissues of the back. For assisting the circulation it may be used on all parts of the body. It may be used in a very thorough manner for the purpose of applying

stimulation or inhibition to the nerves, a very important manipulation procedure.

In using the Laxus Cycle in the treatment of disorders peculiar to women it will be well to bear in mind the following centers:

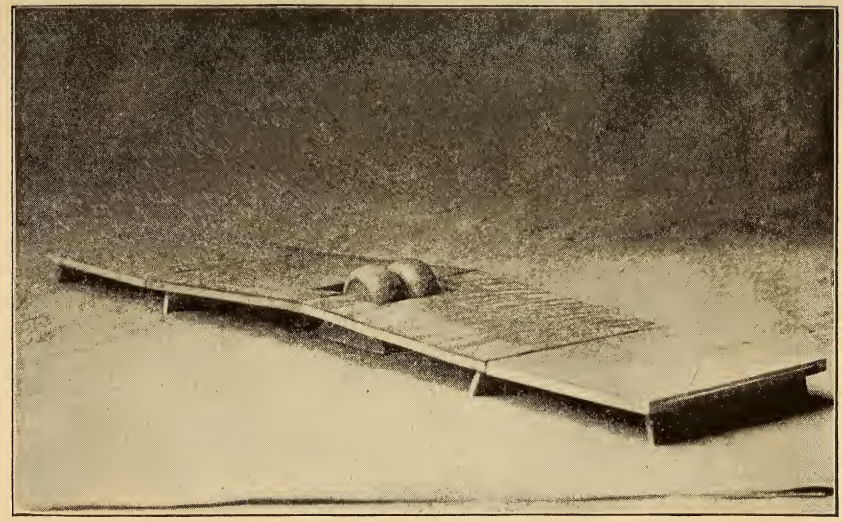
Anus and Bladder.....The Sacrum
Bowels.....9th, 10th, and 11th Dorsal Vertebræ
Genitals.....From 2nd Lumbar to end of Spine
Intestines.....4th Dorsal to 2nd Lumbar
Legs.....11th Dorsal to 2nd Lumbar
Ovaries....9th Dorsal to 2nd Lumbar Vertebræ
Rectum.....Lower Lumbar Vertebræ
Uterus.....2nd Lumbar Vertebræ to Sacrum

If it is desired to inhibit the nerves, or quiet them, steady pressure will be made on these centers with the Laxus-Cycle as in Fig. Nos. 3-6. When we wish to stimulate the nerves we work over the nerve center with the Laxus-Cycle as in Fig. Nos. 8, 9, 10.

The entire Laxus-Cycle is shown in Fig. 1. In Fig, 2 it is shown spread out on the table or floor for the purpose of taking a gentle treatment, which is accomplished by propelling the body up and down on the apparatus by the assistance of the limbs as in Fig. 3. If one desires to give an inhibitive treatment, just rest in one place as indicated for about ten or fifteen minutes. Fig. No. 4 shows the Laxus-Cycle adjusted for a harder treatment and Fig. No. 5 shows it arranged for a severe treatment which is illustrated in Fig. No. 6. In Fig. No. 7 we see the machine divested of its running box and the handles inserted for giving the treatment as in figures 8, 9, and 10. The rollers are made of

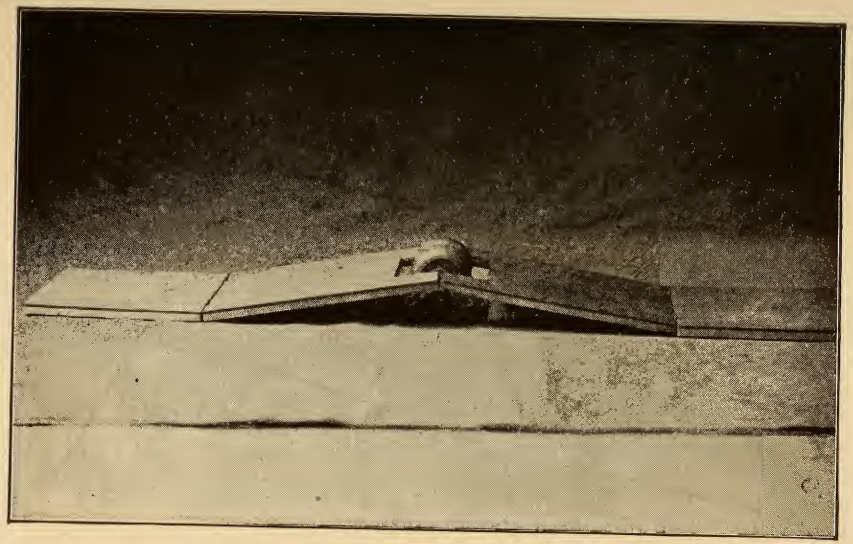
specially-prepared rubber of great resiliency, and are peculiarly adapted for the purpose. This machine is patented and will be furnished by the author, who will furnish simple instructions for the treatment of all diseases.

Laxus-Cycle. Fig. No. 1.

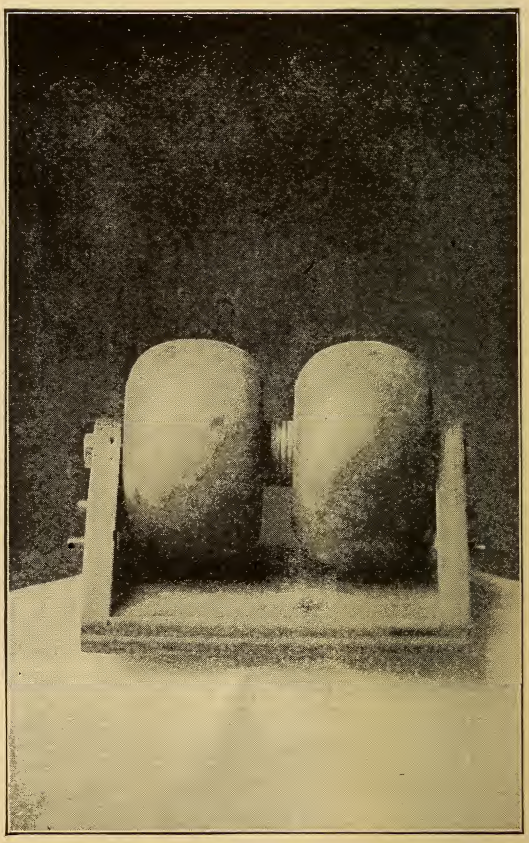


Laxus-Cycle. Fig. No. 2.
In Position for a Gentle Treatment.

Taking a Gentle Treatment.
Laxus-Cycle. Fig. No. 3.

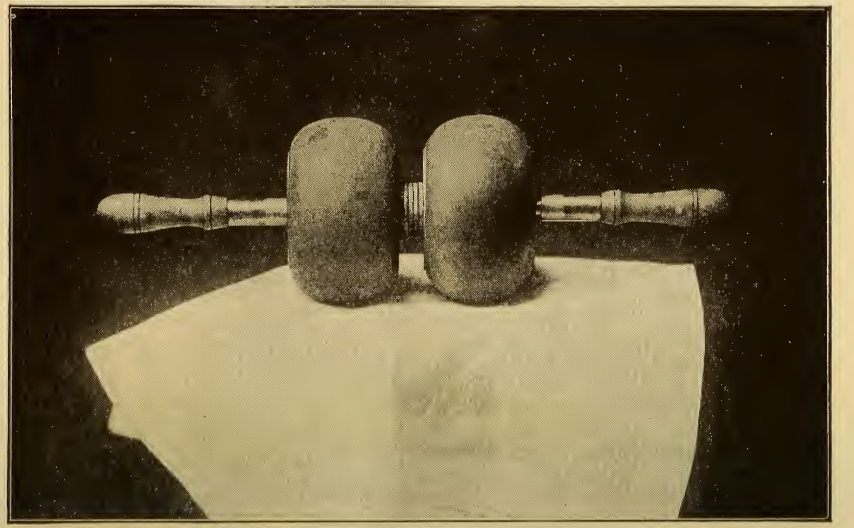


Arranged for a Harder Treatment.
Laxus-Cycle. Fig. No. 4.



Portion Detached for a Severe Treatment.
Laxus-Cycle. Fig. No. 5.

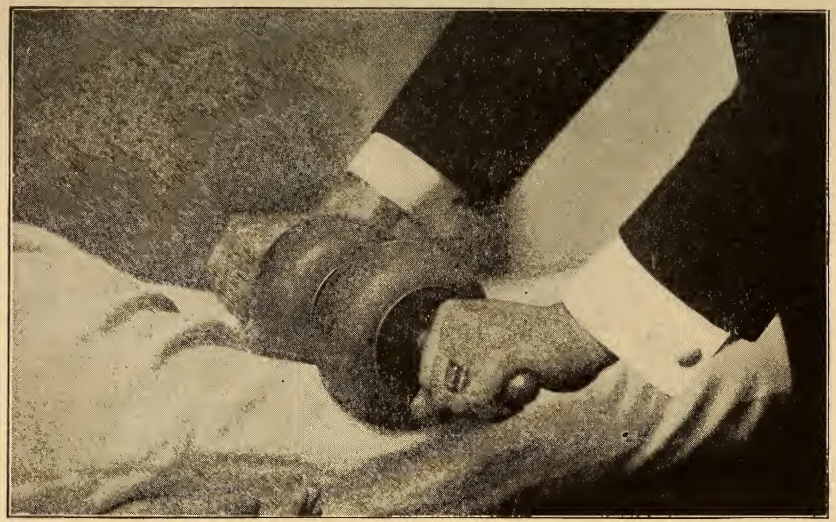
Taking a Severe Treatment.
Laxus-Cycle. Fig. No. 6.



Detached Portion With Handles for Giving a Treatment.
Laxus-Cycle. Fig. No. 7.

Treating the Spine.
Laxus-Cycle. Fig. No. 8.

Treating the Abdomen.
Laxus-Cycle. Fig. No. 9.



Treating the Back of Leg.
Laxus-Cycle. Fig. No. 10.

OBSTETRICS.

Although nature has adapted women to bring forth children without any other assistance than that afforded her by her own inherent powers, still it has been found agreeable to her to have assistance at this time. This help has been given for so long that it is regarded as necessary. It is my intention to give a few simple instructions and not to cover the whole field. Osteopaths do not believe in interfering too much with nature. The whole trend of the treatment should be to assist and let nature take her course as far as possible. An Osteopath should never take charge of an obstetrical case if he has care of scarlet fever, erysipelas or any contagious disease and in a case of this kind he should never be in a hurry, as he should not be prone to help things along with the aid of forceps.

A case of this kind would be greatly benefited if it was osteopathically treated for a month before confinement and it should have osteopathic attention until all danger of bad after effects are over and it was certain that no lesions existed as an effect of the delivery. The hands should be thoroughly cleansed before beginning to help in such a case. Hot water and plenty of soap should be used in preparing the hands for the work. Utensils, dressings, instruments and all water used for the case should be boiled. After cleaning the hands with soap and water immerse them in

a warm solution of mercuric chloride for three minutes. This solution should be 1 : 2000. Convenience and accuracy will be secured by using tablets of the mercuric chloride. Have the nurse use the most rigid antiseptic precautions.

The patient should take a warm bath at the beginning of labor, don clean linen and take an enema for the purpose of unloading the lower bowel. The abdomen and thighs should be scrubbed with green soap and water. Douches should not be permitted in the vagina. Vaginal irrigation is not only useless but is harmful. The normal secretions of the vaginal walls are germ destroyers, they are nature's protection against sepsis. We should not impair them by interfering with their function. The nurse should understand the preparation for the labor-bed and have everything ready for the reception of the child when it arrives. The labor-bed should have a stiff spring, a hard mattress and it would be more convenient if it is a single bed. A rubber sheet should be fastened on the mattress and covered by an ordinary sheet. On the middle third of the bed place another rubber sheet covered by a draw-sheet. Fasten both underneath the mattress. The labor-pad may be placed on this when required. See that there is plenty of hot water at hand and a solution of boric acid for washing out the child's mouth and eyes.

Some osteopaths do not use anesthetics but I prefer to use a little chloroform to deaden the pain. When too much is used it weakens uterine contractions. The patient's face may be covered with a slight coat of

vaseline as a precaution against the irritation which would be caused by dropping the chloroform on it. The nurse will sprinkle a few drops of the chloroform on a folded towel or mask held above the patient's face when each pain is about to come on. The anaesthesia should be only partial.

The physician should be somewhat of an adept in giving psychic treatment for he should have the fullest confidence of the patient. Whatever is told the relatives the patient should think that all is well and thus she will give her most intelligent assistance, for a satisfactory conclusion depends somewhat on the self-control of the patient. After the bowel and bladder have been evacuated he may proceed to the external examination. We may discover evidence of foetal movements and uterine contractions and by palpation determine the height of the fundus and shape of the uterus and what portion of the foetus occupies the pelvis. By auscultation we may hear the foetal heart beat, about 150 per minute, the funic souffle, the passage of the blood through the vessels of the cord, and the uterine bruit, the sound of blood in the vessels of the uterus.

The center which controls parturition is found at the second lumbar vertebra and in case the external os has not dilated to the size of a silver dollar, which it should have attained during the first stage of labor a little stimulation of this center as in No. 32 or 59 will be found helpful. It will help the birth to be much quicker than without such stimulation. If the birth is taking place too rapidly the presenting part

may be held back. Lacerations are very infrequent when a trained osteopath attends a delivery. The uterus becomes very thin at the os, in places, while in other places of this circle they are thicker. The thin places tear and such lacerations are the cause of a great deal of nervous trouble in after years. The osteopath makes the thick places thin, he does this with his hand. One portion of the segment of the os is as strong as another and the danger of laceration is reduced to a minimum. In an osteopathic institution where the birth records had reached over 3000 there were but three lacerations and one of these occurred before the arrival of the doctor. Don't allow a birth to take place too rapidly and keep the rim of the os the same thickness.

Where there is a small pelvic capacity symphysiotomy is performed, a separation of the pubic joint, by the regular physician. It is well known that this joint slightly separates during child birth and it can be made to open still more by lifting up the side of the pelvis of the patient. This may be done in the second stage of labor and it will make it easier in some cases. In case the placenta has not been expelled in half an hour it may be delivered by Crede's method of expression and should be examined by the physician to see that no fragment has been left behind. The uterus should be gently kneaded for a half hour after the removal of the placenta. The abdominal binder is not put on for twenty-four hours. Wait until after the ascent of the uterus. This allows the uterus to ascend properly and the flow to begin. Do not use ergot; it is

responsible for some cases of child bed fever. In primiparae after-pains due to the uterus attempting to expel clots of blood are seldom found to need relief. In multiparous women it will be well to massage the uterus frequently as this contracts it and there is not such an escape of blood.

The patient should remain in bed for at least two weeks. This permits the uterus to regain its position in the pelvis. Allow the child to be placed to the breast for a short time every six hours until secretion of milk. If the child grows restless give it an ounce of sweetened water occasionally. When the flow of milk begins allow the child to nurse every two hours from 6 A. M. to 10 P. M., with an extra nursing in the night for the first two months. Nursing the child promotes the proper involution of the uterus through reflex nervous action.

DIAGNOSIS OF PREGNANCY.

The uterus increases in size by growth during pregnancy; this is true in ectopic gestation (the foetus growing outside of the uterus). The lower part grows faster than the upper part during the first five months. The weight of this organ increases to about 24 ounces. The capacity increases from nothing to about 500 cubic inches.

At the end of the third month the fundus of the uterus has reached the brim of the pelvis. At the sixth month it has reached to the umbilicus and at the ninth month it is at the level of the lower ribs. The

cervix begins to soften about the second month and continues to do so to the end of the period. The vagina, vulva and breasts become softer and in a relaxed condition. The mucous membrane assumes a bluish cast and there is more blood in the breasts. The areola becomes darker and the nipples more prominent and softer.

The vomiting of pregnancy begins during the second month and generally continues through the third month but may persist until the end of the term. There is considerable nerve tension and perversions of taste and smell. There may be neuralgia of the face and teeth. There may be digestive disturbances as the mother is eating for two and the stomach is called upon to perform extra work.

The diagnosis of pregnancy requires considerable skill and should be made after repeated careful examinations especially in the early stages. The suppression of the menses is a sign, but we should remember that mental shock, anxiety, change of climate, and debilitating diseases act as a cause for this. We may presume a lady to be pregnant if she has frequent urination, is overly nervous, has morning sickness and suppressed menses. It is very probable that she is pregnant if there are uterine changes, as to color and shape with softening of the cervix. If there are mammary and abdominal changes. We may be positive that such is the condition if there are foetal heart sounds and foetal movements, when we should be able to produce ballottement.

DIET AND HYGIENE OF PREGNANCY.

The diet of pregnancy should receive careful attention. Sweets, fried food, rich sauces and all drinks that tend to overheat should be avoided. Diet has very little effect on labor as is sometimes taught. A mixed diet is desirable. The food should be digestible and nourishing. It should be sufficient to keep the mother in good general condition. There should be plenty of fruits and coarse cereals to avoid constipation. The food should be plain, simple and wholesome. An ordinary mixed diet will be found to fulfill all practical purposes. Guard against overeating during the last months.

Avoid carriage driving or riding over rough roads. Rough jolting should be avoided. Do not strain in any manner and avoid lifting. Do not perform any work that requires the hands to be held above the head. Walking in the open air is good. Exercise but do not carry it to excess.

Wear loose clothing. Do not allow much pressure on the chest or abdomen. If the abdominal walls are soft and flabby use a supporter that exerts pressure upward. Bathe every day. The temperature of the water should be such as to cause no shock. Warm baths should be taken twice per week. Sexual intercourse will be avoided or at least very much restricted. It should never be performed at the menstrual dates. If there is a tendency for the nipples to retract they should be drawn out and manipulated for a few minutes each day. White vaseline may be used daily on the

nipples for the last month to insure against fissures during nursing.

Do not use drugs for headaches. Avoid calomel quinine and all of the coal-tar preparations. Their effect on the heart is bad. Avoid all excitement and sleep regularly eight hours.

CARE OF MOTHER AND CHILD.

Keep the temperature of the lying-in-room about 70 degrees F. It should be well lighted and cheerful. Keep it very clean, removing all soiled clothes as soon as possible. Change the bed daily and keep the patient quiet. Use the best aseptic precautions in caring for the mother. Change the valvular dressings every three hours during the first two days; after that three times per day will do. Clean the external genitals with a cloth dipped in a saturated solution of boric acid.

The mother has been hard at work bringing a child into the world and she needs plenty of good food. She may use her ordinary diet up to the beginning of labor. During labor, if it be prolonged, she should be persuaded to partake of broth, hot Horlick's Malted milk and any easily digested and nourishing food. After the ordeal she needs rest and being thirsty should have all the water she desires. Meat may be allowed the day after labor. It has been regarded for some time that it is no longer necessary to half starve a woman to keep down puerperal fever and "milk fever." We now use rigid antisepsis, hence there is no

danger in allowing ample food. Steak, chops, eggs, and cooked fruit may be given. The patient's own appetite is a splendid guide for feeding. The nursing mother should be careful to keep in good health. Constipation, indigestion and anaemia must be guarded against. If milk does not have any bad effects it should be used abundantly. The author has had splendid success in using Horlick's Malted milk. He finds that there are so many ways of preparing it that it is relished by the mothers and has a beneficial effect on the mother's milk for the child. The mother should avoid emotional excitement and worry. Do not become overly fatigued.

FEEDING THE INFANT.

Infants brought up on breast milk are stronger and are better able to resist disease than those who are hand fed, for there is no food as good as mother's milk. When it can be furnished it is better than any mehod of artificial feeding and is a help in freeing the child from digestive disorders. When necessary to feed artificially it should be very carefully done as it is full of danger to the infant if carelessly performed.

There are two methods of artificial feeding. Modifying cow's milk and adapting prepared milk to the need of each particular infant. For the poor in large cities condensed milk may be used. As it is deficient in fat and protein, cod-liver oil may be added to make up for the fat and egg albumen, or beef juice to supply the deficiency of the protein. When using cow's

milk the following formula is recommended for a child two months of age:

Top milk,	8 oz.	
Barley water,	16 oz.	
Milk sugar,	6 heaping	teaspoonfuls
or Cane sugar,	4 heaping	teaspoonfuls

The child may take this until seven months old about 24 oz. per day; after that time the proportion may be changed to

Top milk,	20 oz.	
Barley water,	20 oz.	
Milk sugar,	10	teaspoonfuls
or Cane sugar,	5	teaspoonfuls

Top milk may be obtained by skimming 6 oz. from a quart, then adding an equal amount of rich and poor milk. In case the above is hard to obtain equal parts of cream and ordinary milk may be used.

When the child is one year old it can use milk modified with milk and water. Let milk stand six hours; take six ounces from the top, the same from below and mix. Then add an equal quantity of barley water. When curds are vomited and there is indigestion substitute barley water for a while instead of using plain water. Barley water may be prepared as follows: Use two oz. of pearl barley to a quart of water, boil six hours, replacing the water as it evaporates. Strain through a cloth and add a little salt. When cool it is ready for use.

The simplest and best plan will be to use Horlick's Malted milk and follow directions for feeding infants, which is furnished on request with the milk.

PART II.

EXPLANATION OF PART II.

Wherever the word No. or Nos. is referred to in the directions for treating any disease it refers to the paragraphs from 1 to 139 and not to any illustration in this book. The paragraphs often refer to Fig. or Figs., which mean the illustrations and the illustrations only.

PRACTICE OF OSTEOPATHY

OSTEOPATHIC TECHNIQUE

The most important part of osteopathic procedure is the examination of the patient, the determination of the lesion, the discovery of what is wrong in the human building. In some cases nature has taken care of a former abnormality of structure, and then what was once abnormal has become normal. An attempt to make a forcible correction of the apparant abnormality would lead to trouble. In some cases most serious results would ensue.

In other cases, where the real lesion is not discovered, months of routine treatment would be worse than useless and might be a detriment rather than a help to the patient. So we say the first thing and the most important thing to do is to make a careful and painstaking examination of the patient.

If there are no marked osteopathic lesions, the disease in question having been brought on by overwork or abuse of function, as overeating or drinking, there are certain definite areas in which the Osteopath works, and by securing a better nerve and blood supply hastens the recovery of the patient. This is especially true in cases of sickness induced by the various specific microörganisms which are the exciting agents of a long list of

acute diseases, as pneumonia, la grippe, typhoid fever, scarlet fever, measles, chicken pox, mumps, whooping cough, diphtheria, erysipelas, tuberculosis, etc., etc. Even in many of these diseases there are predisposing lesions that weaken certain areas of the body and permit the entrance and growth of these exciting organisms.

Yet in these very regions in which the Osteopath works to help recoveries there are, in a majority of cases, lesions of muscle, ligament, and of the bony structure as well, which have been induced reflexly. The abused organs or the diseased organs have sent nerve impulses to the cord, and they have sent them in such large numbers that they have in turn been sent out to the muscles and other structures lying in close proximity. A muscle is tense in proportion to the number of nerve impulses communicated to it. These abnormal nerve impulses, long continued, have produced contractures; these in turn, by pulling on the bones to which they are attached, have produced bony lesions. Some of these bring pressure to bear on the spinal cord and other structures, and in this manner aggravate the disease.

For the beginner in Osteopathy it will be better to have the back of the patient bare. If the patient is a lady, a gown or kimono may be worn which opens in the back. A suitable kimono for taking the treatment is illustrated in Fig 2. After the operator has had some experience he will readily examine the spine of patients through the gar-

ments, the under clothing at least. As a general thing we know very little about our own bodies. Many are more conversant with the normal cow, horse or hog than with the normal human body. It will be an excellent thing for the one who expects to make a vocation or even an avocation of Osteopathy to study carefully the normal body. Study a number of them. Become thoroughly acquainted with the normal body, and especially with the normal spine. In this way you will be all the more readily able to detect the abnormal.

The practitioner should study the various degrees of motility of the spines, joints, necks, backs, etc., of normal individuals. He should learn the various degrees of tension, tenderness, and pliability of the various muscles of persons in health. A knowledge of anatomy and physiology will be very helpful.

Lesions. It is not every vertebra that is out of line laterally, or deviates anteriorly or posteriorly, that may be said to be out of position in such a manner as to constitute a lesion. Before we can say that a deviation of such a character constitutes a lesion it ought to produce some pathological condition, or ill feeling of some kind. There should be some change in color and some temperature near the abnormality. There should be some contraction in the muscles and ligaments. There should be some inflammation, or a congestion bordering on inflammation, near the seat of lesion. There will be pain in nearly all recent lesions. Pain will be present on pressure. In some conditions the

Figure 1

Figure 2

muscles in close proximity will be slightly swollen and have a rigid feeling when worked over with the hand. It will be always safe and beneficial to manipulate the spine, ribs, ligaments, muscles, and other tissues, but do not attempt to correct a misplaced bone until it is known to be out of place in such a manner as to cause pressure, or is forming an obstruction that is causing some illness. Never manipulate a tubercular joint or spine. Do not cause pressure on lymphatic glands.

Diagnosis, Methods of. The method of diagnosis most in vogue and the principal one which the Osteopath uses is palpation, the use of the hand or hands in determining the condition of nearly all the tissues of the body. With careful work and much practice, comparing the normal with the abnormal, the sense of touch becomes very acute, and the least difference in the density and the motility of the various tissues is readily determined. The patient should be requested to relax all tissues as much as possible and not to make any resistance to the various movements unless requested so to do. The other methods of diagnosis are inspection and percussion. With the beginner, inspection is also important, as by it he notes curvatures, unequal development of muscles, differences in the color of the skin, apparent age, height, weight, peculiarities of gait, manner of standing, sitting, etc.

Percussion enables us to learn the condition, size, shape and position of various organs, the presence

of cavities, gas, tumors, etc. This form of diagnosis calls into use a small hammer, but more generally the second and third fingers of the right hand are used to strike the middle finger of the left hand which has been placed over the part to be percussed. In examining a patient it may be well to begin with the neck.

EXAMINATION AND TREATMENT.

The patient sitting, the examiner stands behind and notes any inequalities on either side of the neck. Sometimes one side bulges and on the other side there is a corresponding hollow. This condition indicates curvature in this region, with the convexity to the full side. On this side the tissues will be found to be hard, tense, and tender. When this condition is present it is frequently indicative of a curvature lower down. We now note whether there are enlarged tonsils, hypertrophied lymphatic glands, goiter, or any unusual pulsations or enlarged vessels.

With the patient now reclining on the back in a comfortable position, with all muscles relaxed, we proceed with the examination by palpation. The neck may be gently manipulated by placing one hand on the forehead, for the purpose of rotating it by using the forehead as a lever, while the other hand manipulates the muscles in the back of the neck for the purpose of further relaxation. In examination, as in treating, the Osteopath never rubs.

Figure 3

Figure 4

He never allows the hand to slip on the skin, but is concerned with moving all the deeper tissues.

The Osteopath now with the points of the fingers examines the tissues just beneath the skull. Often these are found tense, and the patient complains of pain here during examination and treatment. The fingers are now allowed to travel down the mid line at the back of the neck, and find the spinous processes. The first one to be felt beneath the skin is the second, or axis. The position of the first, or atlas, is rarely determined by the spinous process, though in some cases, about one in fifty, it may be found. We are able to count the vertebræ in this manner and to note their position. The seventh, or vertebra prominens, has a very prominent spinous process. It can be differentiated from the first dorsal, the one just beneath it, by rotating the head when the patient is in a sitting position and noting that the spinous process of the seventh cervical moves perceptibly while the spinous process of the first dorsal does not move.

Anterior, posterior, or lateral deviations may be determined by the examination of the spinous processes. The position of the transverse processes may be noted by turning the head to one side, moving the examining fingers up a little and to one side from the spinous process. A prominent projection will be found when the one on the other side will be found in the same manner and the fingers will then move down from one to the next process on both sides, determining the relative position of each

with reference to neighboring processes. This enables us to determine lateral deviations, twists, or torsions of vertebræ; also posterior or anterior deviations from the normal.

Osteopathic treatment of the neck is for the purpose of removing lesions, which may consist of any departure from the normal in any tissue and which is causing abnormality of function. In following the description let us remember that all patients are not to be subjected to the same routine. This is too frequently done, to the detriment of the patient. What follows is for the purpose of describing the work in detail and to describe the work necessary for the removal of the various lesions usually found. This section of the book will be very frequently referred to by the numbered paragraphs where the description of the specific treatment is referred to in the proper treatment of each disease.

1. While the patient is in a sitting position on the side of the table, the operator, standing behind, the right hand placed on top of the patient's head, rotates the head so as to bring the neck of the patient against the thumb of the operator's left hand. The left thumb is moved successively along against the arches of the vertebræ, as shown in Fig. 1. In this manner there is secured a free motion between the vertebræ, and the movement also assists in relaxing the tissues preparatory to removing any vertebral lesion that may be present.

2. The patient is sitting and the operator is standing behind, and bends the neck of the patient as far

Figure 5

Figure 6

forward as possible on the chest of the patient. This stretches the strong posterior neck muscles, including the ligamentum nuchæ.

3. The patient sitting, the operator stands in front and puts his arm about the neck of the patient, so that the bend of the elbow comes beneath the chin of the patient, and the hand grasping the base to the skull. The other hand is free to manipulate any of the vertebræ in any desired direction, though this hold is more applicable to the atlas and the axis. The head of the patient may be given a lifting motion and moved over in the required direction. See Fig. 3.

4. The scaleni muscles, the deeper ones at the side of the neck, are often tight and contracted. Pressure may be made on the first rib on the contracted side, as in Fig. 4, while the other hand bends the head forcibly to the other side, at the same time rotating the head.

5. The patient lies on his back. The operator stands at one side with one hand on the patient's forehead, the other beyond to the other side of the neck. The hand on the forehead rotates the head from side to side, alternately relaxing and stretching the muscles at the side and back of the neck, while the hand placed at the side of the neck stretches the muscles toward the operator with each movement of the neck. The hand on the neck will be moved from one position to another as the tissues relax beneath it, and the hand may be brought down onto the shoulder during the process of re-

laxation. This same treatment may be applied to all the tissues in front of the neck down to the clavicles. See Fig. 5.

6. The hyoid bone may be found just above what is often called Adam's apple, the thyroid cartilage, the largest cartilage of the larynx. The bone feels as if it were shaped like the wishbone of a chicken, minus the protuberance at the angle. While it should be freely movable it is often held tight by the muscles, the supra hyoid and the infra hyoid, attached to it. This bone is frequently drawn backward and downward, and by pressure on nerves is the frequent cause of nervous coughing and may be responsible for complete loss of voice. By manipulating the neck from side to side the thumb and forefinger may be gradually insinuated under it, and it may be lifted up and forward. The tissues all about it should be thoroughly relaxed. See Fig. 6.

7. The pneumogastric nerve may be pressed upon, manipulated and stimulated by deep pressure behind the anterior border of the sternomastoid muscle on a level with Adam's apple, as in Fig. 7. This is a very important nerve, osteopathically, owing to its large distribution to important organs. **7 A.** The spinal accessory and glosso-pharyngeal nerves may be reached by deep pressure upward and inward behind the angle of the jaw. **7 B.** The suboccipital, great occipital, small occipital, and great auricular nerves may be stimulated as in cases of fever, headaches, etc., by deep pressure on both

Figure 7

Figure 8

sides of the spine, just at the base of the skull, as in Figs. 8 and 9. The founder of Osteopathy, Dr. A. T. Still, when but a small boy, made pressure on these nerves by placing his head in a swing. See Fig. 10. He found that this pressure relieved his headache. This accidental discovery may have had something to do with his discovery, later in life, of Osteopathy. **7 C.** By deep pressure of the tissues of the neck against the transverse processes of the second and third cervical vertebræ we may stimulate the superior cervical ganglion. See Fig. **9 A.**

8. We will have occasion to refer to springing the lower jaw by opening and closing the mouth against resistance. The operator stands behind the reclining patient, with hands under the chin and at both sides of the jaws of the patient, who is directed to open and close the mouth slowly, the operator resisting. This frees the tension of muscles and allows more freedom of blood vessels below the jaw. See Fig. 11. **8 B.** In connection with the above the hands may be used to draw up the tissues under the chin. Let the movement be circular and deep. The points of the fingers are used to execute this movement. See Figs. 12 and 19.

9. The head may now be twisted as far as possible to one side without causing inconvenience to the patient; then to the other side in the same manner. We often notice in executing this movement that it moves further to one side than to the other. On the side to which it turns the least we

look for muscular or ligamentous lesions. See Fig. 13.

10. The head may be pushed as far forward as possible onto the chest, loosening the posterior muscles and other tissues far down the spine. See Figs. 14 and 15.

11. Some operators can use a very effective spiral treatment of the tissues of the back of the neck. One hand is placed on the forehead of the reclining patient, the other beneath the neck. The neck and head are both raised. The head is rotated in one direction, the neck in the opposite direction. Then the movement is reversed. See Fig. 16.

12. A number of movements have been devised to reduce atlas lesions. One has been given above as in No. 3. These movements may be used in a slightly different way for the other cervical vertebræ. The operator stands at the head of the table, the patient reclining. The operator grasps the head firmly with both hands and makes pressure with the fingers against the arch of the atlas behind. He raises the head slightly, supporting it against the body. Now as he rotates the head he presses the bone toward the normal position. See Fig. 17.

13. The neck tissues may be stretched as in Fig. 18. In some cases it will be of material assistance, in the case of light patients, to have an assistant to hold the feet of the patient, to afford greater resistance.

Many other movements in the treatment of the neck will be developed in the regular routine of

Figure 9

Figure 9 A.

practice by the skillful operator. This will be true of every portion of the anatomy as well as of the neck.

THE HEAD.

Most of the treatment for the purpose of affecting the head is given in the neck, upper dorsal and other portions of the body. Nevertheless the Osteopath does some direct work on the head.

14. While the patient is lying on the back the palms of the operator's hands are passed from the center of the forehead each way, with varying pressure down over the temples and behind the ears. This movement has a quieting effect on the patient, soothing the nerves, and is frequently used in headaches. It affects branches of the fifth nerve on the forehead. See Fig. 20.

15. One palm is placed across the forehead and the other beneath the skull, or both palms may be placed on the forehead, one on top of the other, and great pressure exerted for a few seconds and repeated several times. See Fig. 21. This is useful in colds, headaches, etc., as it helps to relieve the pressure in the longitudinal and lateral sinuses, large veins of the brain.

16. Treat along the midline of the skull, from the nose to the back of the neck, using the thumb in a circular, pressing motion with varying degrees of pressure for the same purpose as Nos. 14 and 15. See Fig. 22.

17. We may tap with the knuckles or percuss

with one finger laid upon the center of the forehead in treating headaches, colds, etc.

18. Manipulate on each side of the nose and loosen all the tissues for the purpose of affecting the fifth nerve and freeing structures in close connection with it. See Fig. 23.

19. Use deep pressure, with a gliding movement of the little finger, to work over a portion of the fifth nerve, supplying the tear duct, for the purpose of opening it or keeping it open. Begin at the inner corner of the eye. See Fig 24.

20. The forefinger will find a little depression in the skull, just below the eyebrows, between the center and inner margins of the eye, where the supraorbital branch of the fifth nerve emerges from the skull. It is a nerve of nutrition to the eye, and passes outward over the forehead at an angle of forty-five degrees. Free the tissues about and in this little opening with a gentle, pressing, circular movement of the tip of the forefinger. See Fig. 25. Work along the nerve with the palm of the thumb. In some cases of neuralgia it will be found to be extremely sensitive, which will be greatly lessened as tissues are relaxed about it. In treating the eyes this nerve is often stimulated. The nerve may be felt beneath the skin.

21. The fifth nerve may be treated where it emerges from the skull above the eye, in Figs. 25 and 20. Also over both jaws, above and below the roots of the teeth. It may also be treated below the malar cheek bones, as in Fig. 26. It may be

Figure 10

Figure 11

treated along the sides of the nose, as in Fig. 23. Thorough treatment of this nerve is frequently necessary in cases of neuralgia.

THE EYES.

22. The fingers must be very clean as they work inside of the orbit to tone up weak or contracted muscles in cases of strabismus. The finger may be inserted deeply, yet carefully, and worked around the eyeball, both to relax and free up the tissues and to promote a better circulation.

23. The nail must be thoroughly clean as it is used to break up the little blood vessels which form a network running into the pterygia, which, if let alone, will grow towards and cover up the pupil of the eye.

24. Granulations may be broken up by crushing them between the thumb and forefinger. For this purpose, folds of the lid may be lifted up, or one finger may be inserted beneath the lid.

25. The patient, lying on the back, the eyeballs may be pressed back into the orbit several times with the palms of the thumbs and held there for a few seconds. This helps in toning up the various structures and assists in the general circulation of the eyes.

26. The palm of one finger may be placed over the eyeball and tapped, as in percussion, by the forefinger of the other hand. This acts very much as No. 25, and is useful in cases of cataract. See Fig. 27.

THE SPINE.

27. The patient sits on the side of the table and the operator notices any deviation from the normal in exaggerated curves, lateral curvature, or any number of vertebræ or a single vertebra which may be misplaced. He notes any tenderness, as he palpates with the fingers, that may be found in the tissues on either side of the spine or between the spinous processes. See Figs. 28 and 29 for fairly normal spines.

28. The tips of the spines, the spinous processes, may be noted by the red color brought out on them by swiftly passing the hand over them with some pressure. In this manner their position may be noted, thus disclosing any deviation from the normal.

29. A finger may be placed each side of the spinous processes and passed down, in this manner noting any lateral deviation from the normal. This may be done either on the bare spine or over the clothing worn in treating. See Fig. 30.

30. The palm of the hand may be passed down rapidly, from the base of the skull to the sacrum, for the purpose of noting any deviations from the normal, either posterior or anterior.

Pressure exerted on the top of the head, as in Fig. 69, will frequently reveal tenderness at some point in the spine.

31. The patient rests in the prone position, lying on his stomach, while the operator, with the palms

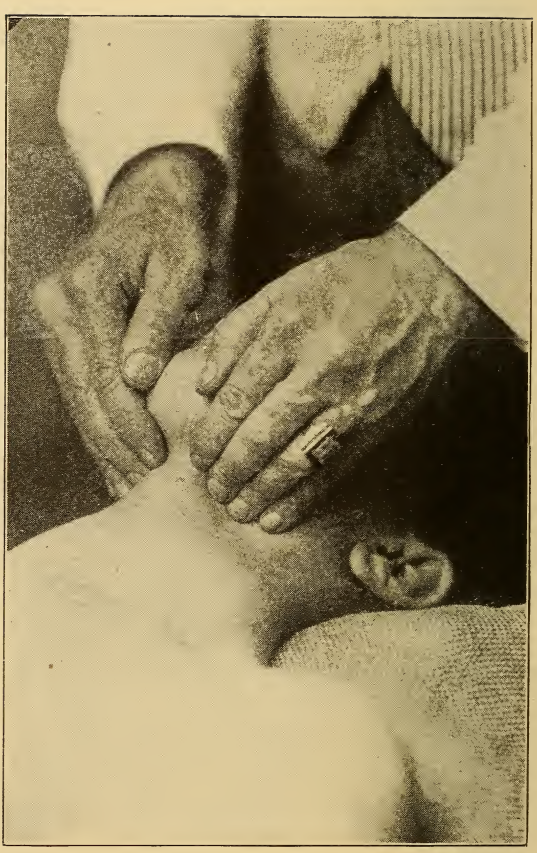


Figure 12

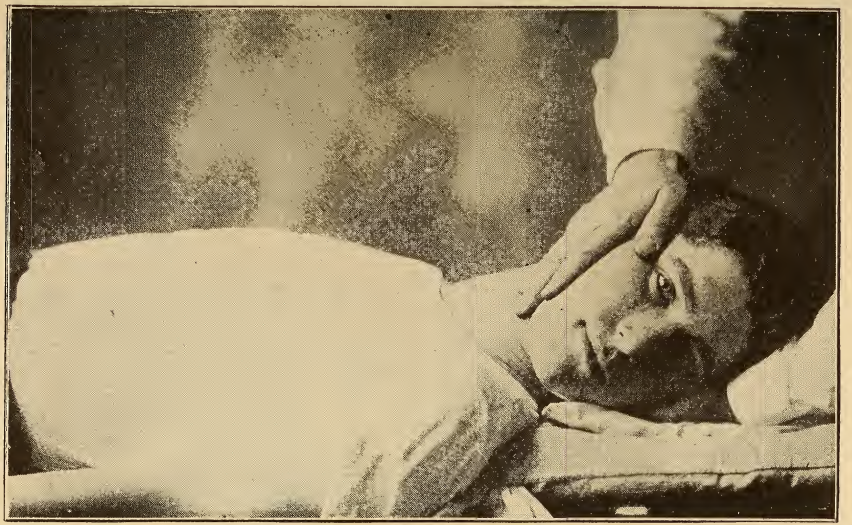


Figure 13

of the fingers, notes contracted muscular tissues, pulling the muscles away from the spine on either side. These contracted muscles often feel like small ropes beneath the fingers. See Fig. 31.

32. The limbs of the patient are flexed as he lies on his side, and the operator holds them in this position as he gently springs the spine, as in Fig. 32, noting its relaxed or contracted condition.

33. While the patient is lying on the side in a comfortable position the vertebræ are carefully examined by the fingers of the operator. Pressure is made between the spinous processes of each one, to note the condition of the ligaments and the approximation or separation of the various vertebræ. See Fig. 33. When the ligaments have grown too thick they fill the spaces and produce what is known as the smooth, stiff spine.

34. With the patient sitting on the side of the table, and the operator standing behind, he may begin the treatment of the back by placing the tips of his fingers on the patient's shoulders and with the thumbs loosen the muscular tissues in the upper part of the back. If the hands are long he can travel up and down a good portion of the back with the fingers in the above position. See Fig. 34. The fingers may now be used in relaxing all the tissues on the shoulders from the neck over the top of the shoulders.

35. While the patient is sitting the operator passes one arm over one shoulder and under the opposite arm in front. With the other hand he

makes fixed points on the spine with the thumb, against which he rotates the body with the other arm, and in this manner thoroughly loosens the structures and replaces misplaced vertebræ. See Figs. 35 and 36. The position is reversed and the other side of the spine is treated in the same manner. The patient may be held, as in Fig. 68, one shoulder braced against operator's body.

36. The patient sitting, and the operator standing behind places one hand on the top of the patient's head and with the other hand makes fixed points with the thumb along the spine, using the head and neck as a lever. The use of the hands may then be reversed and the other side of the spine treated in the same manner. The operator will be surprised with the efficiency of this movement and the power that can be exerted at any given point along the spine against the thumb by making the right pressure on the head. See Fig. 37.

37. The patient sits, preferably on a stool, and places his hands behind his neck. The operator stands behind and passes his hands under the patient's arms and takes his wrists and places one side of the flat of his knee at the patient's spine and lifts the patient up and backward against the knee. This is an efficient treatment for loosening the various articulations and stretching the ligaments which have become tightened. It stretches the spinal, scapular and neck muscles. The lower ribs are raised. See Fig. 38.

38. The patient sitting, the operator stands to

Figure 14

Figure 15

Figure 16

Figure 17

Figure 18

Figure 19

Figure 20

Figure 21

one side and behind, or kneels beside the patient on the table, and passes one arm back of the patient's neck and under the patient's arm on the other side, thus bending the patient's neck forward. With the free hand fixed points are made along the spine and the patient's body is rotated against the thumb of the operator. This movement is very effective in upper dorsal regions. See Fig. 39.

39. The patient sitting, the operator stands behind and places one knee beneath the arm of the patient in the axilla. This holds the shoulder and the ribs on that side in a fixed position. The operator may use one or both hands in raising one or more ribs or in stretching the opposite side. See Fig. 40. This may be used in combination with Figs. 46, 47.

40. The patient is sitting, and the practitioner stands behind to one side and reaching around the patient in front grasps the lower edge of any rib. With the other free hand he raises the arm of the patient on the same side as he lifts the rib. This will be helped by having the patient take a deep breath as the rib and arm are raised, then holding both as the patient expels the air. See Fig. 41.

41. The patient is sitting on a stool with the knees against the wall. The operator stands behind and places his knee on the appropriate round of the stool, with the knee against the vertebræ he wishes to correct, seizes the patient by the shoulders or under the arms and pulls the patient back against the knee, rotating the patient to make

the necessary correction of the spine. Extreme care must be exercised in executing this movement for fear of injury to the patient. See Fig. 42.

42. The patient while sitting on the side of the table is bent forward so that his head is between his knees, the operator using forcible pressure on the upper dorsal region and head. This relaxes the ligaments of the lumbar and sacro-iliac regions. See Fig. 43.

43. The patient is sitting on the side of the table. The operator is standing in front of the patient, with a pillow between himself and the patient. Both hands clasp the spine of the patient as in Fig. 44, when deep pressure may be made, sinking the vertebræ well in; then by rotating the body pressure may be made to the side wished. This is an excellent movement to correct a lateral curvature or any lateral or posterior displacement. In case of an anterior displaced vertebra the vertebræ above and below may be brought forward in this manner, thus gradually correcting the one which is anterior.

44. The position is the same as in 43 for both operator and patient. By grasping the spine firmly on each side the patient may be lifted and the spine stretched, or correction may be made in this manner when only two or three vertebræ are approximated too closely. See Fig. 45.

45. Fig. 46 shows an excellent movement in cases of spinal curvature. The side which is shortened may be stretched by using the wrist under

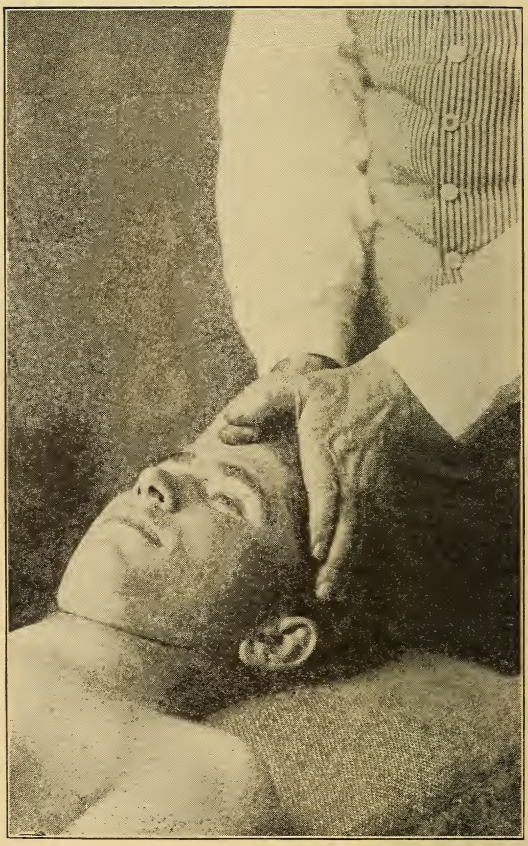


Figure 22

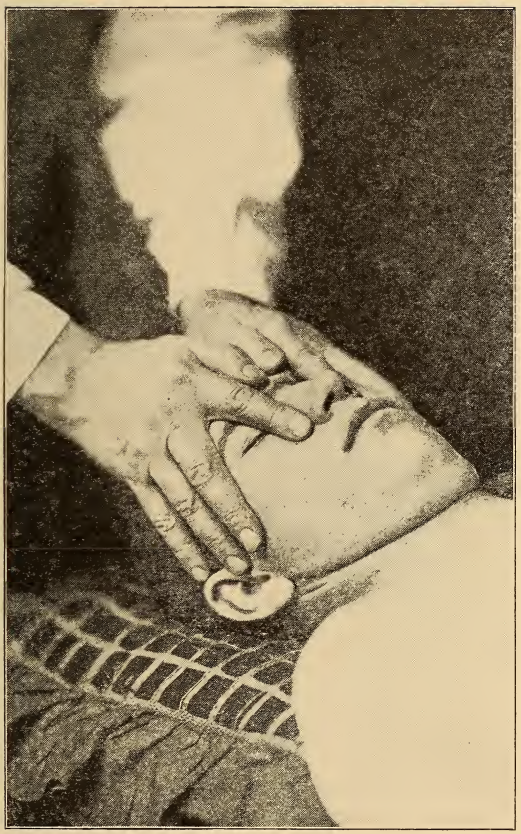


Figure 23

the patient's arm, and the hand, as shown in the figure, raises and stretches the side. The other free hand moves from point to point along the spine and forces it over into position.

46. The side may also be stretched, as in Fig. 47. Firm upward pressure may be made with the hand grasping the ribs while traction is made on the upstretched wrist of the patient.

47. The patient lies in as easy a position as possible, with the face downward, but for comfort the face may be turned to one side, with the toes extending over the end of the table. Let the arms hang over the side of the table. Have the patient relax as much as possible. The operator uses the palms of the hands in a circular, pressing movement to relax all contracted tissues of the back. See Fig. 48. With the cushions of the fingers he can pull the muscles away from the spine, as in Fig. 31.

48. With the patient lying in the prone position, the operator standing at one side of the table grasps the hip of the patient on the further side in front. The heel of the other hand can then travel up and down the spine, exerting considerable pressure while the other hand pulls the hip upward, giving the spine a torsion. The operator works from both sides. This movement is very effective in removing lesions and relaxing contracted tissues. See Fig. 49.

49. With the patient in the prone position, lying across the table as in Fig. 50, the operator stands at the head of the patient, and with the thumbs

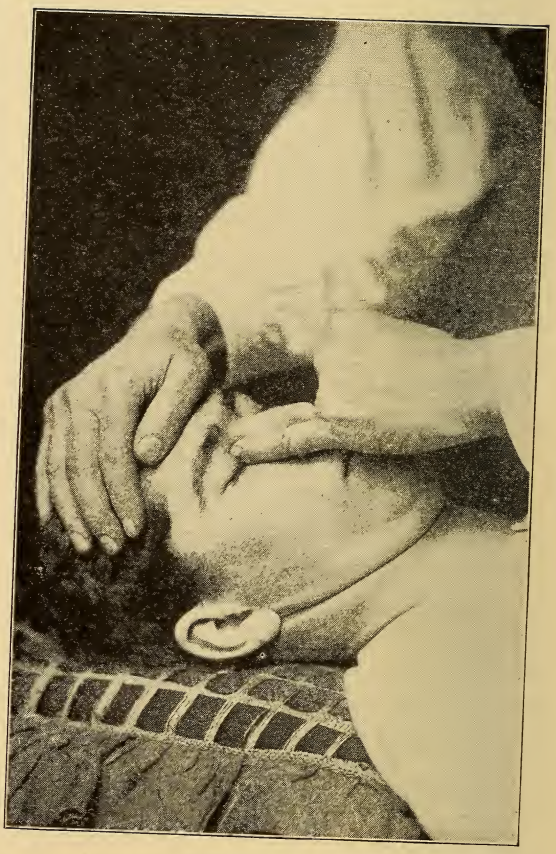
working each side of the spine he can further relax tissues and stimulate the nerves through the spinal cord.

50. With the patient in the prone position, and the operator standing at the head of the table with the thumbs each side of the spine, as in Fig. 51, he can further relax the tissues and can also exert considerable pressure when necessary to correct posterior displaced vertebræ, or for the purpose of stimulating the spinal cord and through it the organ or organs which receive their nerve supply from any particular section of the spinal cord.

51. The patient is in the prone position, and the limbs are raised in the operator's arm, as in Fig. 52, and rotated while the other hand makes fixed points with considerable pressure on the lower part of the spine.

52. The patient is in the prone position, and pressure is made in the lower part of the spine, while first one then the other limb is raised, as in Fig. 53. This movement, as well as No. 51, assists the operator in relaxing the tissues and replacing posterior vertebræ.

53. The patient lies on his side in a comfortable position. The operator stands in front and grasps the patient's uppermost arm, as in Fig. 54. With the other hand he relaxes the tissues about the shoulders and down to the spine and pretty well down the back, using the arm as he holds it at the elbow as a lever, working it back and forth to aid in the manipulation. The spine is manipulated



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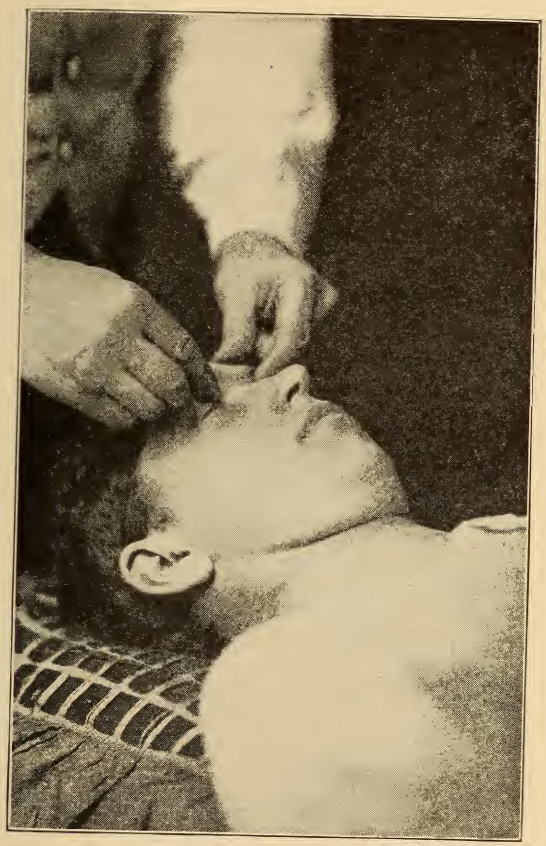

Figure 25

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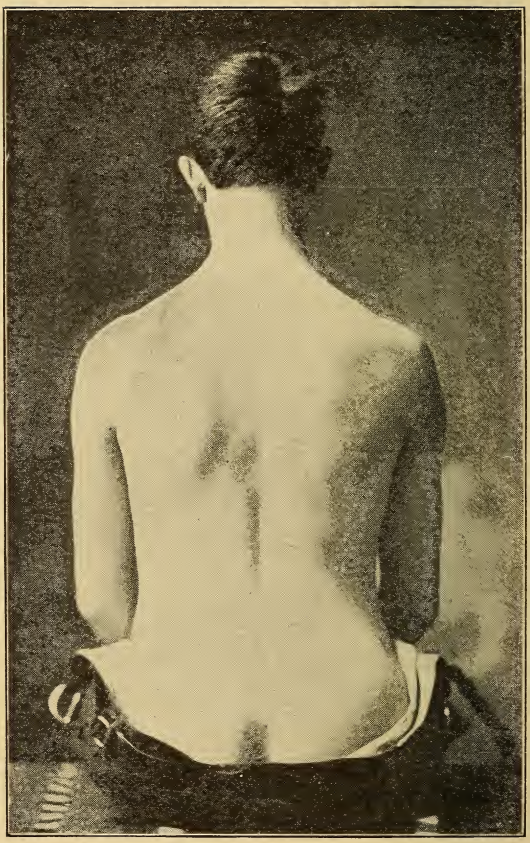
Figure 27



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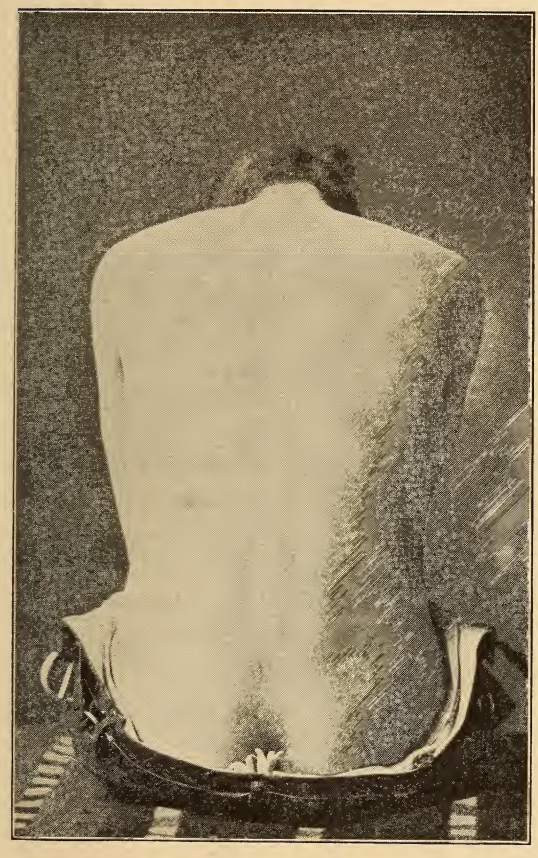


Figure 29

and any deviations are corrected at the same time and in the same manner.

54. The tissues may be so relaxed that the shoulder may be manipulated quite freely. One hand may pull up the scapulæ, while the other presses on the shoulder, as in Fig. 55. The hand may also be insinuated under the scapulæ, as in Fig. 56, and the tissues thoroughly manipulated and loosened.

55. While the patient is reclining on the side, and one hand has made its way under the patient's scapulæ, the other hand grasps the patient on the shoulder and rotates the entire shoulder. See Fig. 57.

56. The patient is lying on his side on the table. The operator places one hand beneath the patient's neck and grasps the occiput, as in Fig. 58. The operator brings his chest against the other side of the patient's head. In this manner considerable traction may be made on the neck and upper dorsal region, and very effective corrective work may be done with the spine with the free hand as shown in the cut.

57. The limbs of the patient may be flexed and braced against the operator, who bends over and grasps the spine thus brought into relief, as in Fig. 32. The spine at any point may now be manipulated by pulling it toward the operator.

58. With one elbow on the hip, the other on the shoulder, as in Fig. 59, as the patient is lying on the side, the operator's arms may be extended,

thus stretching the hip away from the shoulder while the hands are free to manipulate tissues and the spine as well.

59. The patient lies on the side, and the operator, with one hand in front of the hip and the other hand behind the shoulder as in Fig. 60. By pulling on the shoulder and pushing against the hip the spine may be twisted for the purpose of relaxing tissues, including muscles, nerves and ligaments. With the same motion the side of the back uppermost may be stretched by separation of the operator's arms.

60. Fig. 61 is the exact opposite of the above, and the torsion is applied by reversing the position and motion. This is very useful for stretching and relaxing the various tissues of the back and spine.

61. The patient lies comfortably on his back. The elbow of the patient is held by the operator with one hand, while with the other he reaches across the body of the patient and grasps the muscles of the back, as in Fig. 62. The arm may be stretched as movements are made to loosen the tissues manipulated with the free hand. The spine may also be manipulated with the free hand its entire length.

62. The patient lies on the back, and the operator stands at the side of the table and reaches across the body of the patient and grasps the spinal edge of the scapulæ, pulling it out as he brings the arm of the patient across the chest, as in Fig. 63.

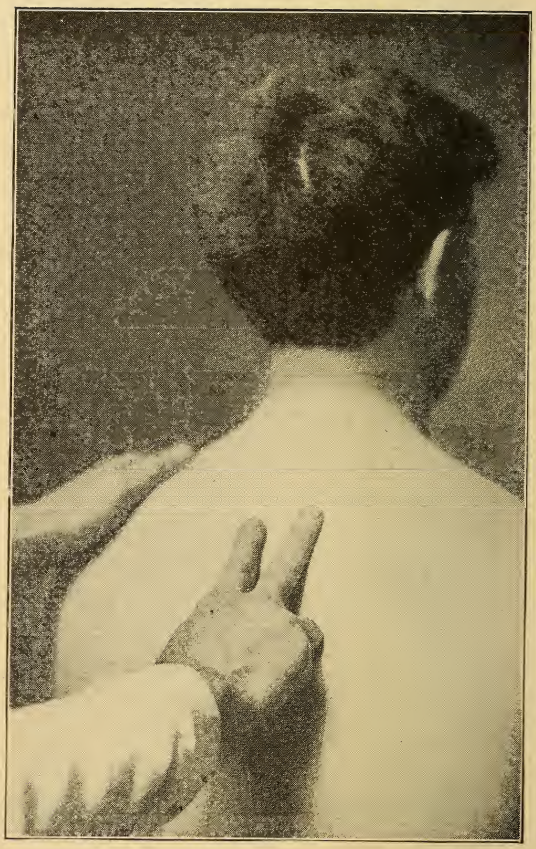
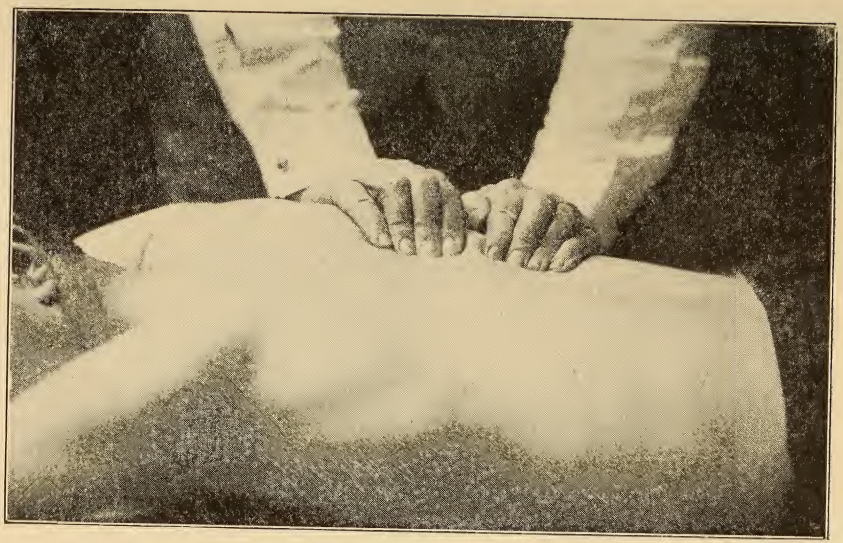


Figure 30



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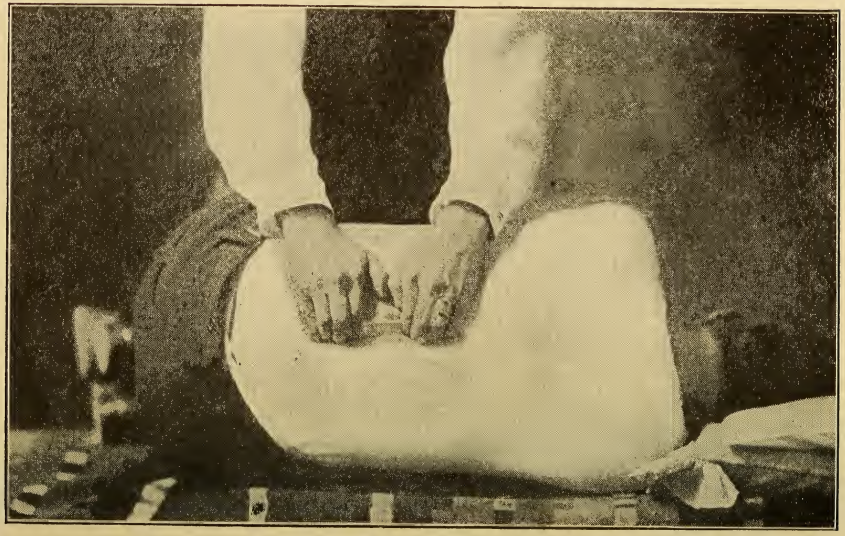

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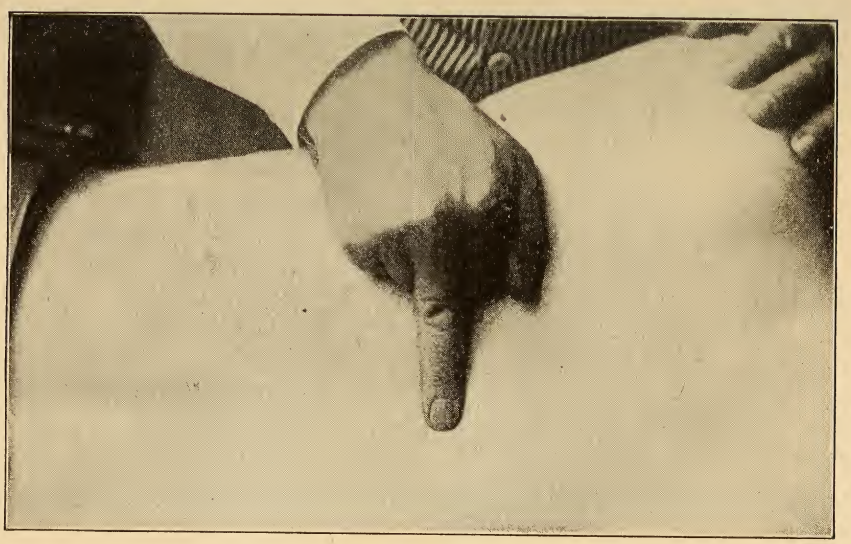

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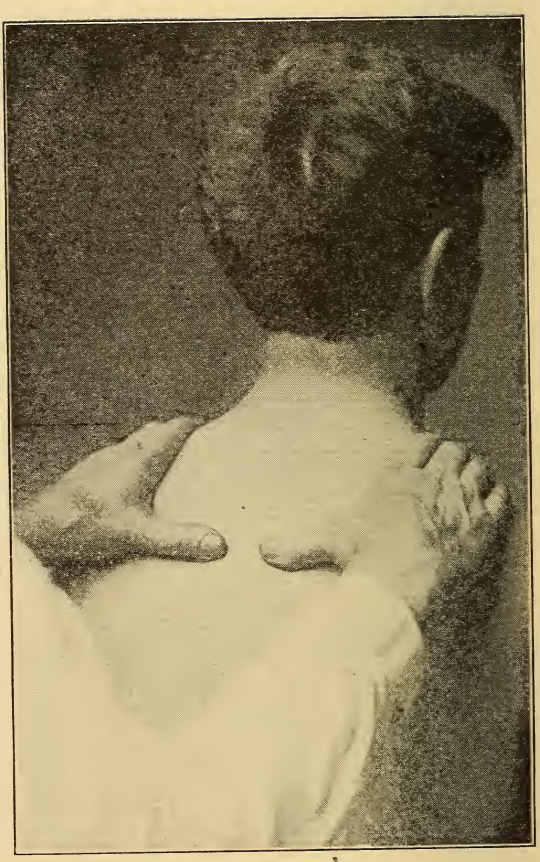


Figure 34

Figure 35

63. A small patient lies on the back. The knees are grasped in one hand and flexed, as in Fig. 64. The free hand is introduced under the patient, grasping the lower part of the spine and manipulating it as the knees are made to describe a circle. This is a very thorough method of manipulating the lower dorsal and lumbar regions of the spine.

64. The patient lies on the back. The knees are flexed on the thighs and the thighs are brought forcibly against the abdomen. The pressure may be relaxed, then increased. This movement relaxes the ligaments and muscles of the lumbar and sacro-iliac regions. See Fig. 65.

65. The fifth lumbar vertebra is frequently found posterior. With the patient on his back, the clinched fist of the operator is placed under the vertebræ and one limb at a time is taken by the ankle and forcibly put through the motion of external circumduction, straightening the limb out with considerable force, thus bringing the weight of the body on the vertebra.

66. In case the fifth lumbar vertebra is anterior the lesion is more difficult to reduce. The ligaments may be loosened, as in Nos. 63 and 64, and the vertebra moved from side to side, as in Nos. 35 and 57, thus gradually bringing it into its proper position.

67. In case we desire strong inhibition, for the purpose of lessening the number of nerve impulses passing from any section of the cord to any given organs, we may hold the spine with a strong grip,

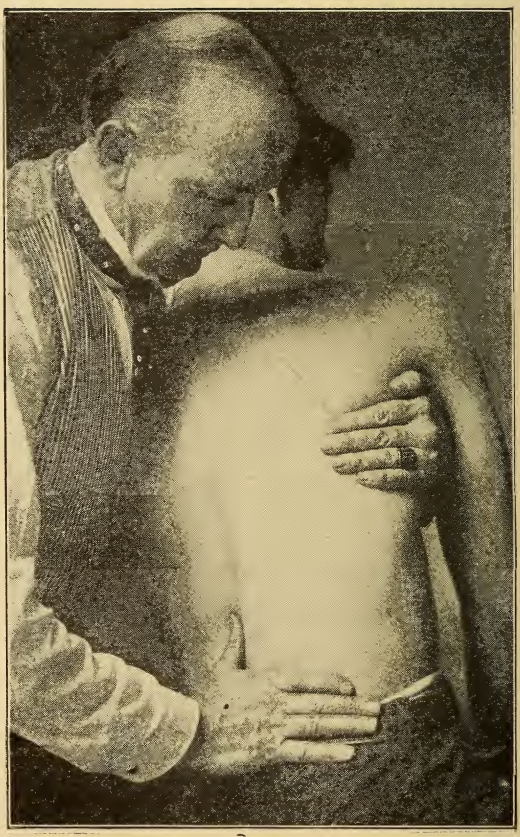
partially lifting the body from the table, as in Fig. 32; or we may place a book under the spine, requesting the patient to recline heavily upon it, as in Fig. 66. The position of the book, as indicated in the cut, is for the purpose of quieting the peristaltic action of the bowels in cases of excessive diarrhœa.

68. When the sacrum is found to be posterior it may be moved to its proper position in many cases by properly relaxing the sacro-iliac ligaments as in Nos. 47, 51, 52, 64. Then have the patient lie on the side of the table. The operator then places his knee against the sacrum and pulls back on the hip and shoulder, thus gradually forcing the sacrum into position. See Fig. 67.

69. Another movement for restoring to its proper position a posterior sacrum is for the patient to sit on a stool. The operator places his knee against the sacrum, and holding the patient about the body rotates it as he pulls it backward, thus bringing pressure to bear on the sacrum. See Fig. 42.

70. The coccyx is frequently misplaced. It can be manipulated after relaxing the tissues about it. Frequently it is found necessary to insert the forefinger into the rectum, when the coccyx may be grasped by the thumb and finger and moved in the desired direction. This latter treatment should not be given oftener than once per week, and must be carefully done for fear of injuring the delicate tissues.

71. The finger, anointed with vaseline, is inserted



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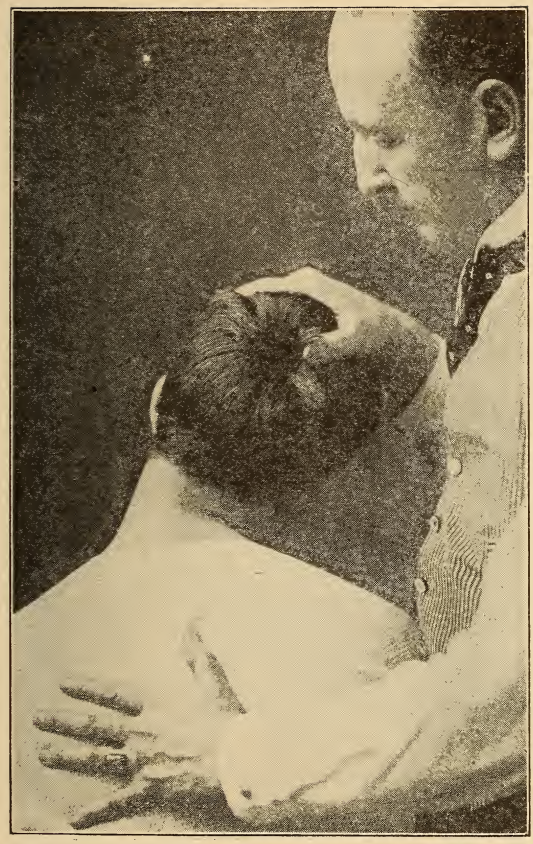
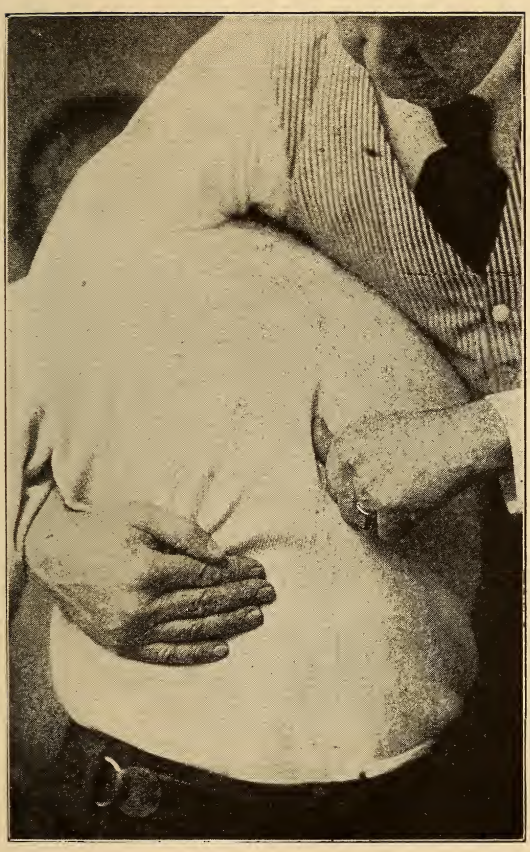


Figure 37

Figure 38



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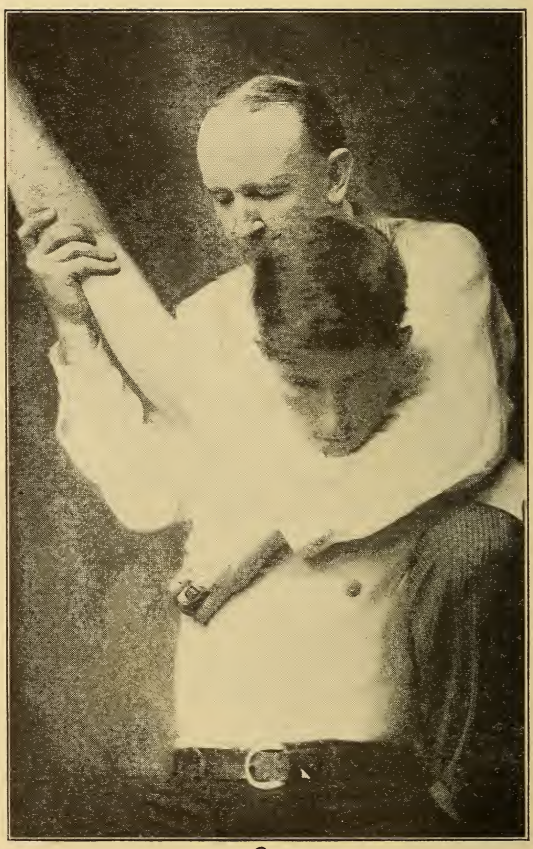

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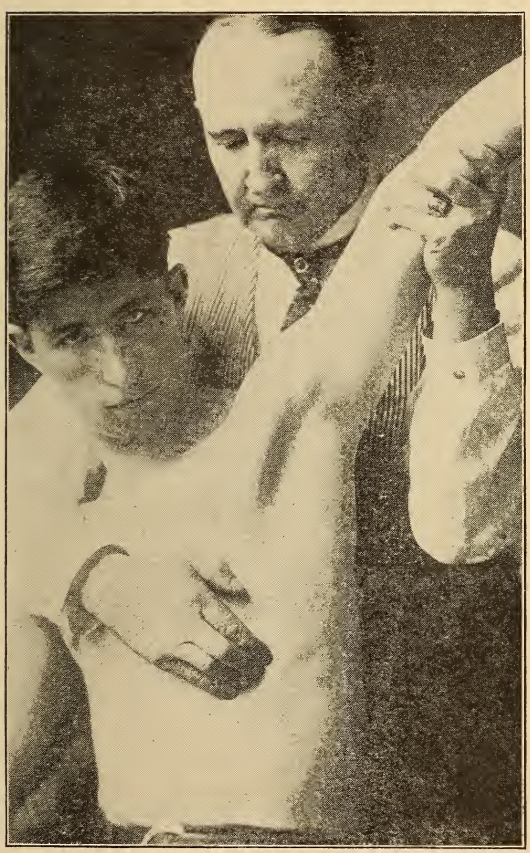

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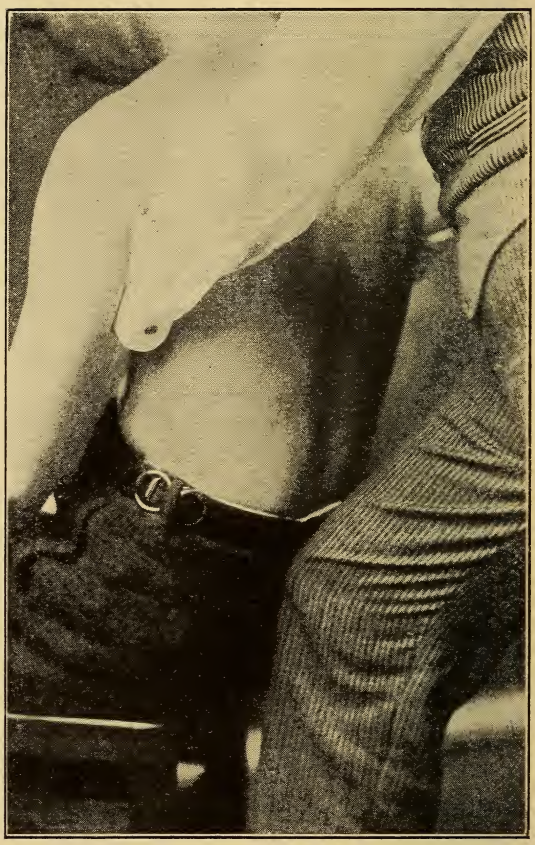


Figure 42

Figure 43

into the rectum for various purposes by the Osteopath. In doing so, time must be given for the sphincter muscle to relax. In piles, the finger presses the blood out of the congested veins, and with a circular, sweeping motion with the palm of the finger smooths out, frees and stimulates the action of nerves and blood vessels. In case the rectum is prolapsed it may be pushed up into position.

72. The clavicle, or collar bone, is frequently found displaced. The sternal end, when out of position, affects the tissues of the throat and is a prominent factor in diseases affecting this region, including goiter and circulatory and nerve disturbances in the arms. The operator stands at the side of the table and takes the elbow of the patient, who is reclining, and inserts the fingers of the other hand under and above the clavicle, near the sternal end. The elbow is now brought over the breast of the patient and the fingers inserted more deeply under the clavical. This movement brings heavy pressure onto the fingers by the clavical, which results in raising the latter, when the sternal end can be placed in or toward its normal position. See Fig. 70. This treatment may be applied at either end of the clavicle as the case may require.

73. The clavicle may also be raised and placed in its normal position with the patient sitting, as in Fig. 71. The elbow is grasped and raised, which raises the clavicle, when the thumb may be inserted above and under it. By bringing the elbow upward

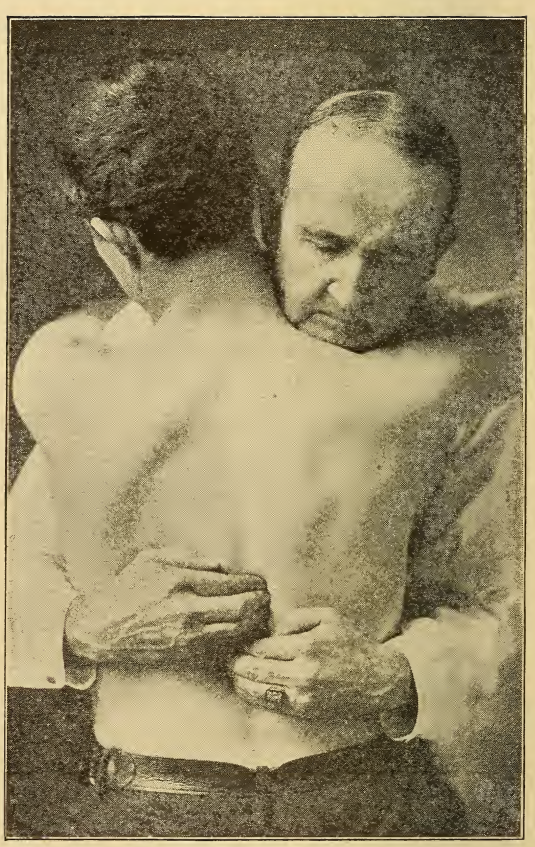
and across the chest the clavicular ligaments may be stretched and the clavicle properly replaced. This treatment is effective for either end of the clavicle.

THE THORAX.

In treating the thorax we must remember that the ribs are connected with the vertebræ, and that when the spine has a curvature, or one or more vertebræ are twisted or displaced in any manner, the ribs connected with those vertebræ are very frequently misplaced as a result. These combined lesions cause secondary lesions of the muscles, ligaments and cartilages. In correcting any maladjustment of the ribs advantage is taken of the muscles attached to them, especially the pectoral and latissimus dorsi muscles.

74. The vertebral end, or head of the rib, is nearly a fixed point. Pressure exerted at the angle of the rib tends to move the rib about that fixed point. This movement is made more effective by the forcible elevation of the arm and in some cases by the rotation of the shoulder.

75. The first rib is often raised near the sternal end. It may be depressed after the scaleni, the muscles of the neck, are thoroughly loosened. It may be depressed by pressure as the operator stands behind the sitting patient, as in Fig. 4. The head is bent forward and rotated, as in the cut. This stretches the scaleni muscles attached to the rib. The pressure is still applied as the head is turned toward the rib.



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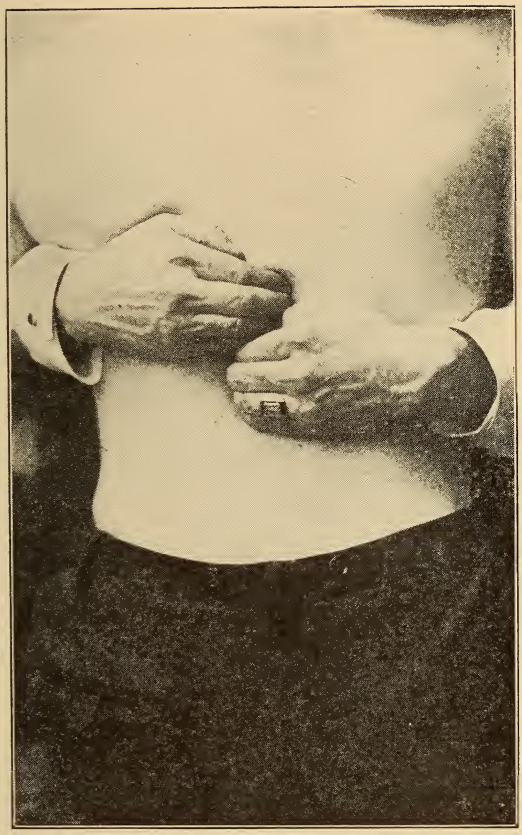

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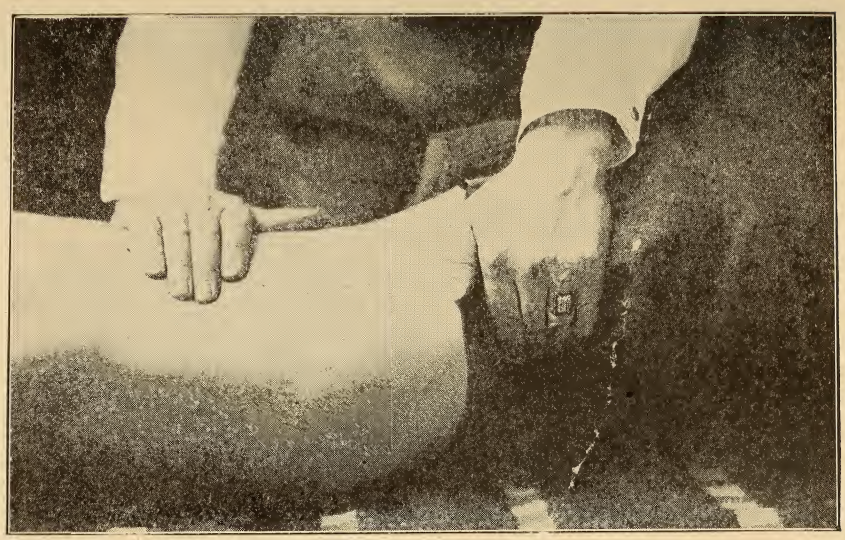

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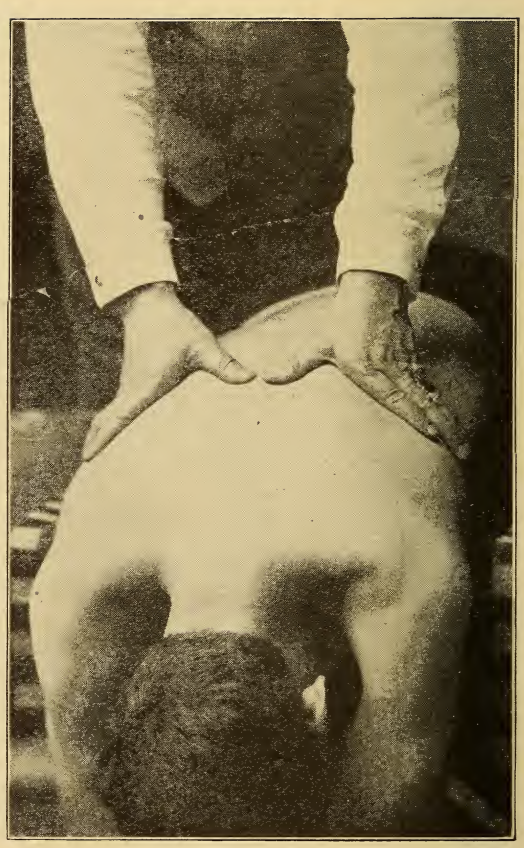

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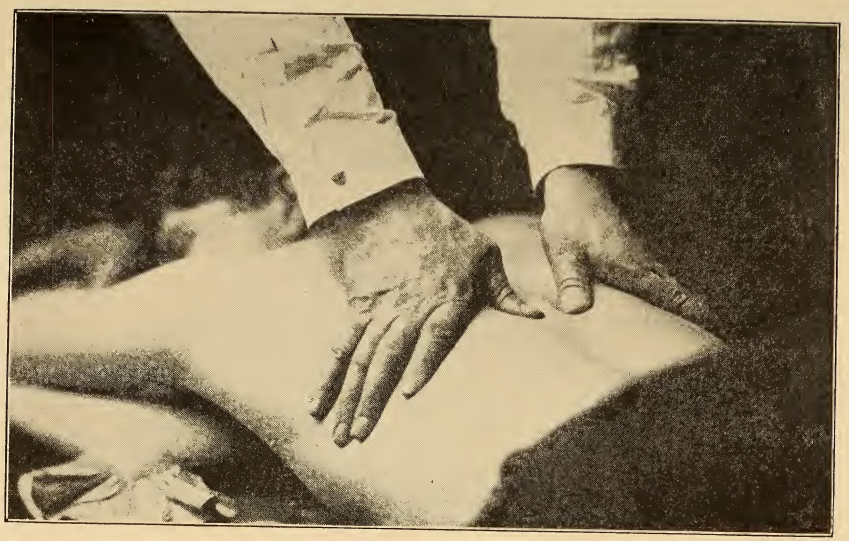


Figure 51

76. The first rib may be also corrected as the patient is in the recumbent position, as in Fig. 72. The head is raised and rotated away from the rib, while the pressure is applied to the rib. Later the head is rotated toward the rib as the pressure is again applied.

77. A further treatment for the first rib is applied as the patient is in the recumbent position, as in Fig. 72. With the head turned toward the affected rib and slightly elevated, pressure is made on the rib with the thumb, and the elbow on the same side is grasped and carried across the chest to the opposite shoulder.

78. When the first or second rib is displaced downward it can be raised; the patient sitting, the operator standing behind. The operator places the tips of the fingers at the lower border of the rib and lifts on it as he rotates the head, with the free hand, forward and then strongly backward. This uses the neck muscles, the scaleni, to pull the rib upward. Should the anterior cartilages protrude they may be pressed into position as the above treatment is being given.

79. Should the first and second ribs need elevating, nearer the spine, the operator may stand in front of the sitting patient while he presses and lifts up near the head of these ribs, while he rotates the head forward and to the opposite side with considerable force. See Fig. 73.

80. The first rib may be depressed, with the operator sitting at the side of the patient with the

patient's arm across the operator's shoulder. This elevates the structures on that side. Pressure is now made on the upper border of the rib, just above the clavicle, as the head is rotated to that side and forward. See Fig. 74.

81. The practitioner stands in front of the sitting patient. One arm reaches around the patient, a little past the spine to the angle of the ribs, as in Fig. 47, while the arm of the patient is raised on the same side. The arm is stretched up and rotated back and down while the operator lifts on the angle of the rib. This serves to lift the rib in front as well as at the angle, because of the traction exerted on the pectoral muscles in front by the elevation of the arm. This motion should be carefully executed, yet sufficient strength should be used to make it effective. It may be repeated several times if necessary. The hand which holds the ribs may select one after another, as may be necessary, as the arm is stretched and rotated. In giving the above treatment the muscles, nerves, and ligaments are strengthened and toned. If one rib is very much lower than it should be the patient should take a full breath when the rib is pulled up, and as the breath is expelled the rib is still held for a few seconds.

82. Fig. 46 represents another method of elevating and separating ribs. The patient sits and the operator stands in front. The operator forces the spine to the side in question, which helps to separate the ribs. The arm of the patient is raised by the

Figure 52

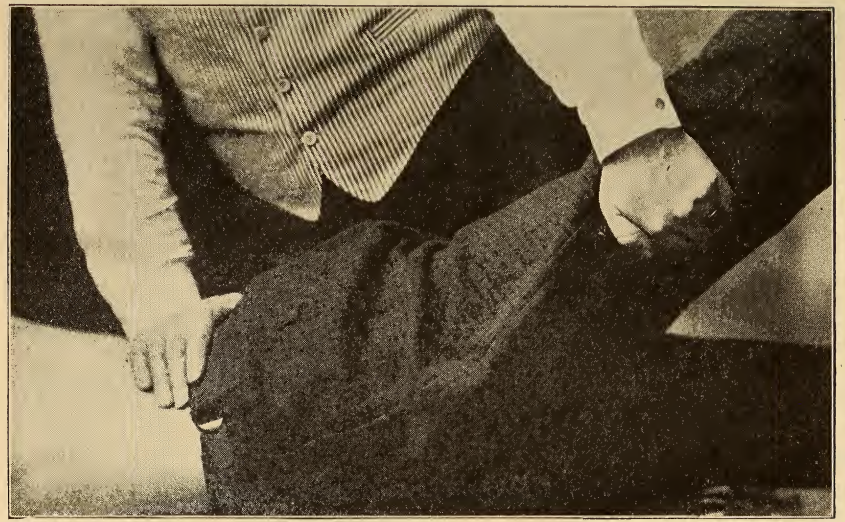
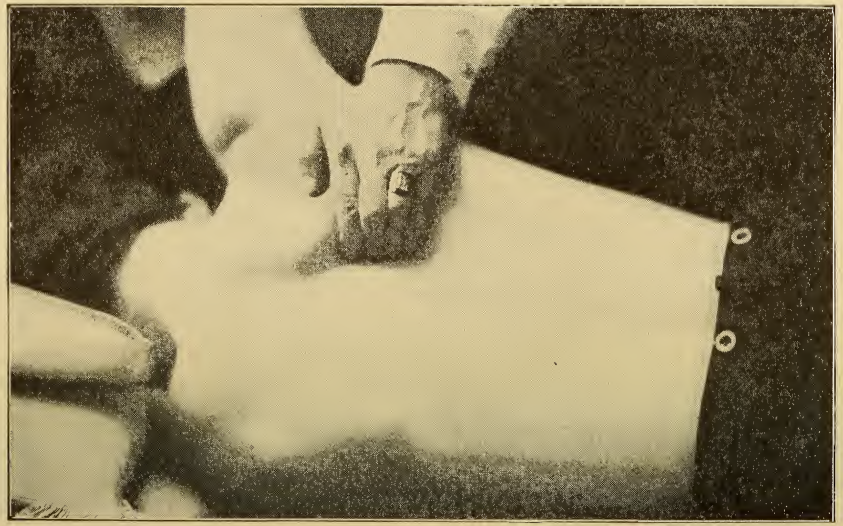


Figure 53



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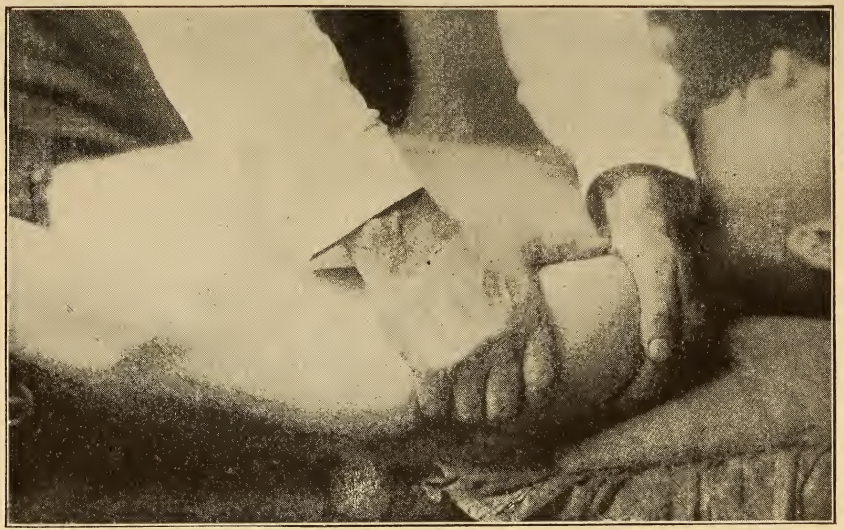

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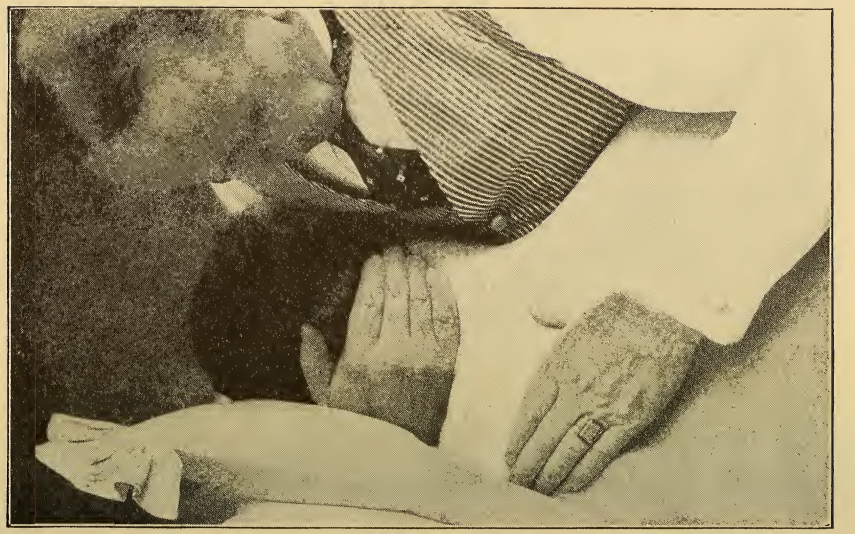

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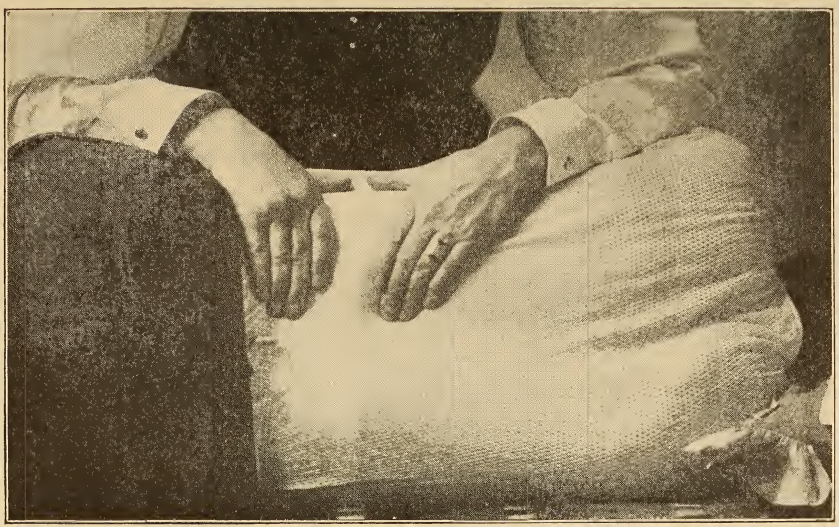


Figure 59

wrist on that side, which raises the ribs. A combination of 81 and 82 is frequently effective.

83. The patient sitting and the arm of the patient across the shoulder of the operator, as in Fig. 75. This gives more of a hold on the lower rib while the patient's head is bent away from the side being treated, curving the spine and throwing the rib more into relief.

84. The patient sits on a stool and the operator stands behind, with his knee against the angle of the rib. With one hand the operator elevates and rotates the arm of the patient, and with the fingers of the other hand, beneath the rib in front, lifts upon it as the patient takes a deep breath. The entire treatment may be reversed and the rib depressed. See Fig. 41.

85. The patient is sitting. The operator standing in front grasps the head of the rib in question, with one hand passed about the patient, while the other hand presses on the sternal end of the rib. By rotating the body of the patient the rib may be sprung into position.

86. The patient is reclining on the back. The operator, standing to one side, reaches over and takes the arm of the patient on the other side. With the free hand he takes the rib at or near the angle, as in Fig. 62, and as he pushes it into place he lifts up on the outstretched arm and rotates it backward. This calls into play the anterior muscles attached to the rib or ribs and assists in the movement. The patient may further assist the operator

by taking a deep, full breath as the rib is lifted up, which the operator holds for a few seconds as the breath is exhaled.

87. The patient may lie on the side. The operator uses the same general movements as in No. 86. This of course applies more to the upper ribs.

88. As the patient lies in the prone position the heads or angles of the ribs may be replaced, as in Figs. 76, 50, 51, by working directly over them.

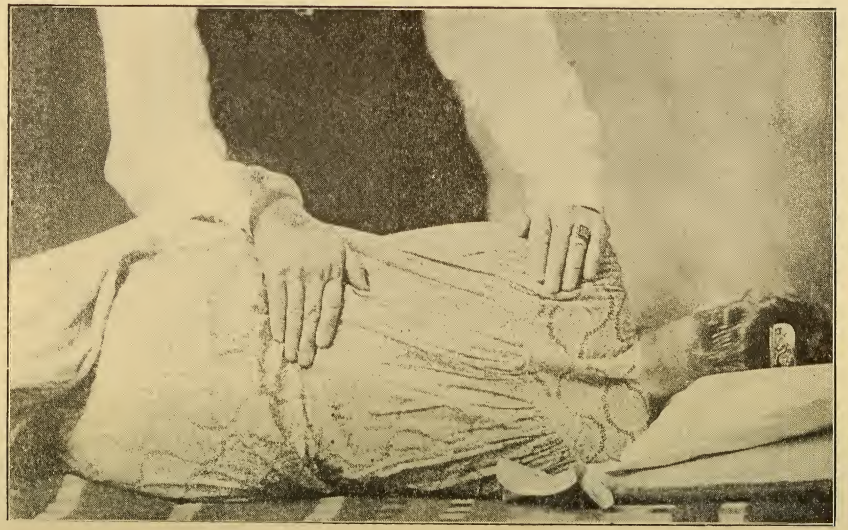
89. When the patient lies in the prone position many cases of luxated ribs may be treated by pressure of the thumbs against the angles of the ribs, throwing the ribs either upward or downward, as indicated by the needs of the condition.

THE ELEVENTH AND TWELFTH RIBS.

90. These ribs are very frequently found displaced. The surrounding tissues must be fully relaxed. When the rib or ribs are displaced upward we have the patient lie on the side, with the limbs flexed on the abdomen, when the ribs may be grasped by the operator and pushed into position, forcing them upward.

91. The patient sits on the side of the table, while the operator holds each end of the rib. The patient takes a full breath, and as the patient exhales, the rib is pushed into position.

92. When the rib is displaced upwards the patient takes either position, lying on the side or



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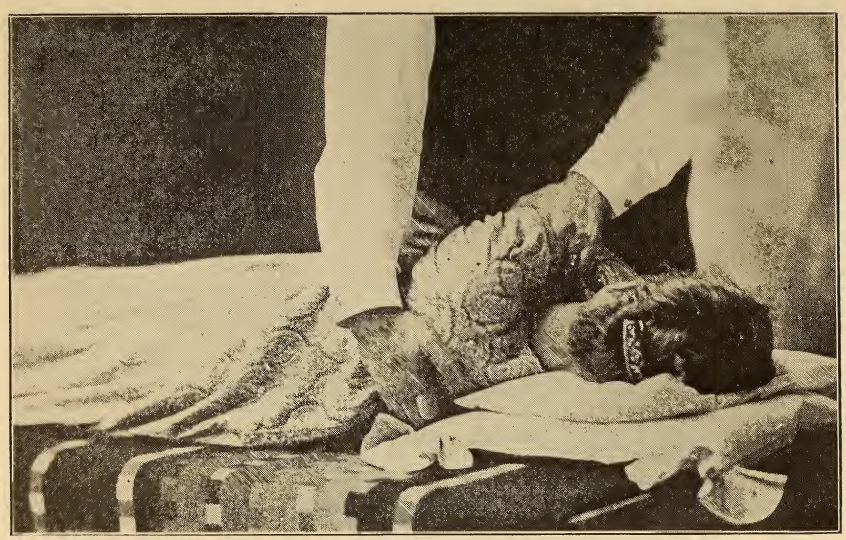
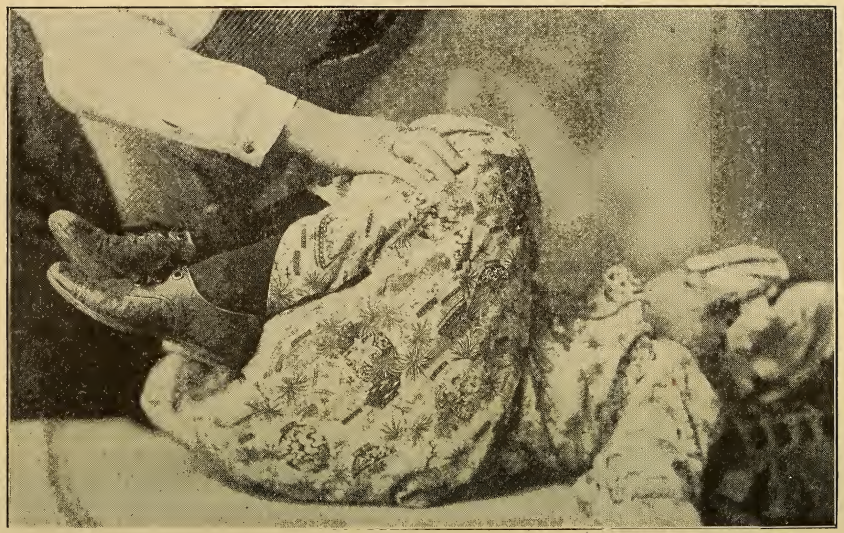


Figure 63



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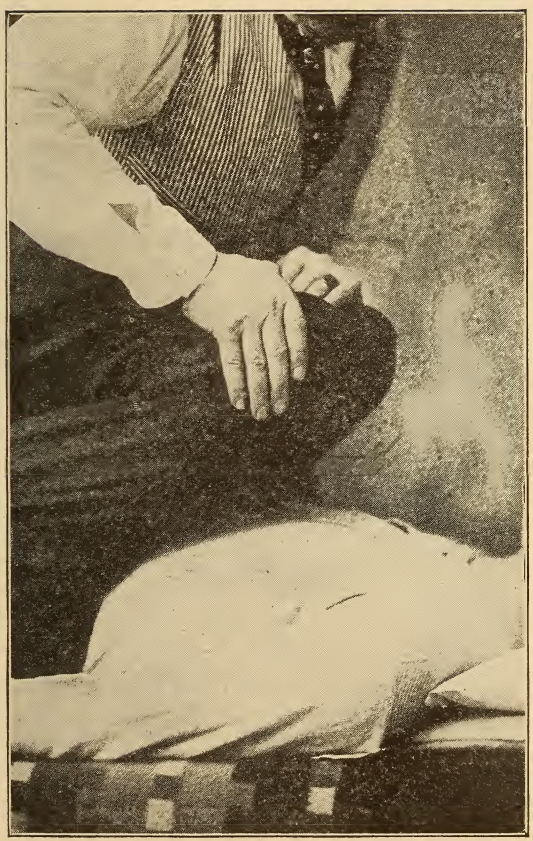

Figure 65

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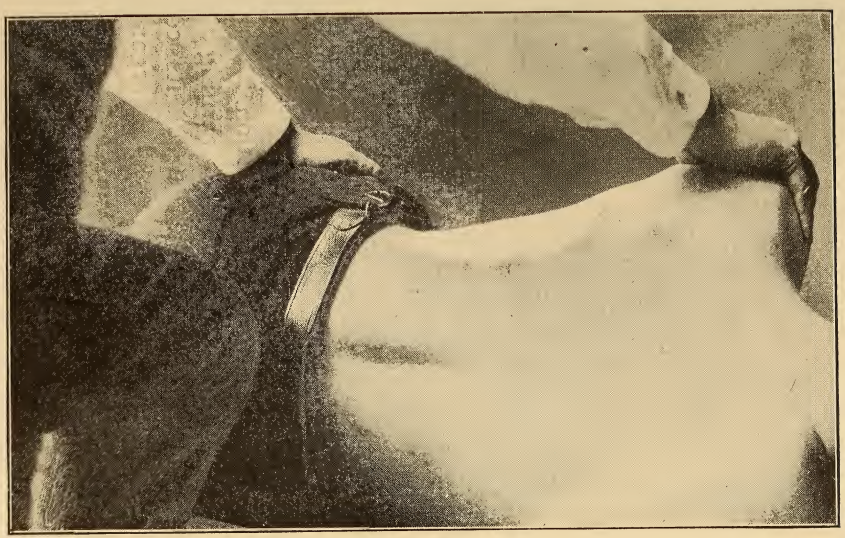


Figure 67

sitting, and the rib is manipulated, as in Nos. 90 and 92, only in the opposite direction.

93. Frequently we find the ribs flattened over the liver or stomach. They may be pulled out, as in Fig. 77. Then they may be rounded into shape by using pressure on the ribs at the sides, as in Fig. 78. Repeated treatment in this manner will materially affect their shape.

In treating and manipulating affected ribs or misplaced ribs we find it necessary to repeat the treatment. In some cases it takes considerable time, a number of treatments being necessary for permanent results. The ribs are so prone to slip back into their old positions when they have been out of position for a long time.

THE ABDOMEN.

The Osteopath in examining the abdomen uses inspection, percussion and palpation. The latter conveys the most information concerning the condition of this important region and its contents. We note displacements of various organs, new growths, tumors, relaxed or tense conditions of the muscles, differences in temperature, enlarged or pulsating vessels, muscular contractions, distended or contracted walls, etc.

94. A general treatment of the abdomen is frequently very helpful, either for relaxing or toning muscular tissues, for increasing or decreasing the amount of blood in the abdominal vessels, and for its general effect on the nerves. The patient lies

on the back, with the knees flexed. The operator stands at one side of the table, and with the palm of the hand, not the tips of the fingers, relaxes the muscles of the abdomen. The operator may begin low down to one side and work up on that side, then on the other side in the same manner. The ribs may be slightly sprung inward to assist in the relaxation of the abdominal walls as they are undergoing manipulation, as in Fig. 79, which shows the general position of the hands. The abdomen may be spanned by the hands, with the thumbs on one side and the finger tips on the other side, and the abdominal contents moved in this manner from one side to the other.

95. In treating any part of the body, but especially the abdomen, the hands should be of such a temperature as not to be disagreeable to the patient. Cold hands used here will cause a contraction of the tissues, and thus interfere with the work. Direct pressure may be made with the flat of the hand, as in Fig. 80, over the center of the abdomen well below the umbilicus. Pressure may be gradually increased, with some side pressure to force the contents of the small intestine toward the cæcum, the lower part of the large intestine which lies low down on the right side.

96. It is often advantageous to lift up the intestines, as in Fig. 81. With the patient reclining, the knees should be flexed to allow of more thorough relaxation of the abdominal muscles. This movement should be repeated several times and the

abdominal contents held for a minute or so each time.

97. The patient is sitting, and the operator is standing behind. He places the sides of the palms of the hands deeply beneath the abdominal contents, as in Fig. 82. The patient is requested to bend forward as the operator twists his wrists, so that the sides of the hand next to the patient are turned inward and upward. Then request the patient to straighten up as the operator lifts the contents, and holds for a moment.

98. The patient lies on the side, permitting a relaxed condition of the abdominal walls. The operator stands behind, as in Fig. 83, and lifts the abdominal contents upward, and may also lift them toward the median line, thus straightening out the cæcum, or sigmoid flexure, as the position may allow.

99. The operator may straighten out the sigmoid, and at the same time tone up the muscular tissues, by insinuating the palms of the hands deeply and low down on the left of the abdomen, and suddenly lifting the contents. The movement must be carefully and cautiously performed.

100. It is often of advantage, as will be indicated in various treatments, to tone up the solar plexus. This may be done by deep steady pressure, with a slightly circular motion just below the sternum. Pressure should be directed backward and upward, as in Fig. 84.

101. The liver, spleen, and stomach and other

upper abdominal viscera may be toned by placing one hand on either side of the ribs, as in Fig. 85. Pressure, alternating with a few seconds of rest, is made as indicated.

102. The liver and adjacent abdominal viscera may be toned by alternating pressure and relaxation directly over that organ, as indicated in Fig. 78.

103. The gall bladder lies underneath the anterior portion of the liver, just beneath the points of the ninth and tenth ribs on the right side. The bile duct leaves it at this point and proceeds to the duodenum, in the shape of a reversed letter "S" when it enters that portion of the small intestine, about one and a half inches below the umbilicus. In cases of gallstones, or inflammation of the bladder or duct, we may assist nature in emptying the bladder and pass stones along the duct by manipulation.

THE PELVIS.

In the treatment of diseases peculiar to women, and some diseases peculiar to men, lesions of the pelvis play a most important part. One may never expect to effect a cure while these lesions are permitted to remain. To remove them is of the greatest importance.

Pelvic lesions will also be considered here because they affect the limbs, causing sciatica, paralysis, enlarged veins, errors in circulation, etc. These lesions are often accompanied by spinal lesions, which also affect the spine and through it other internal

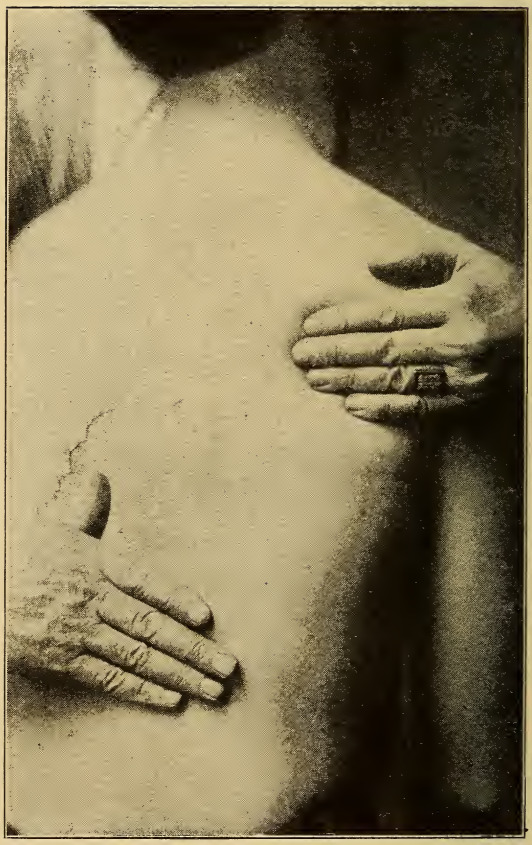
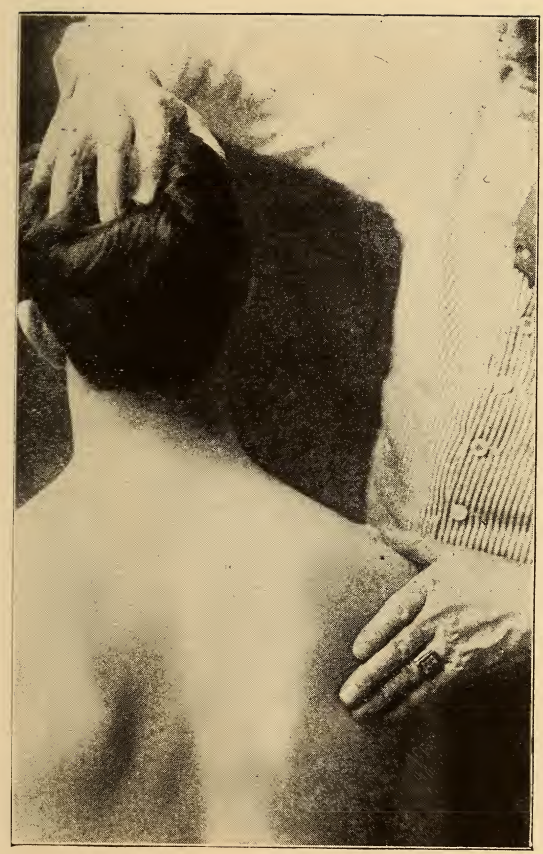


Figure 68



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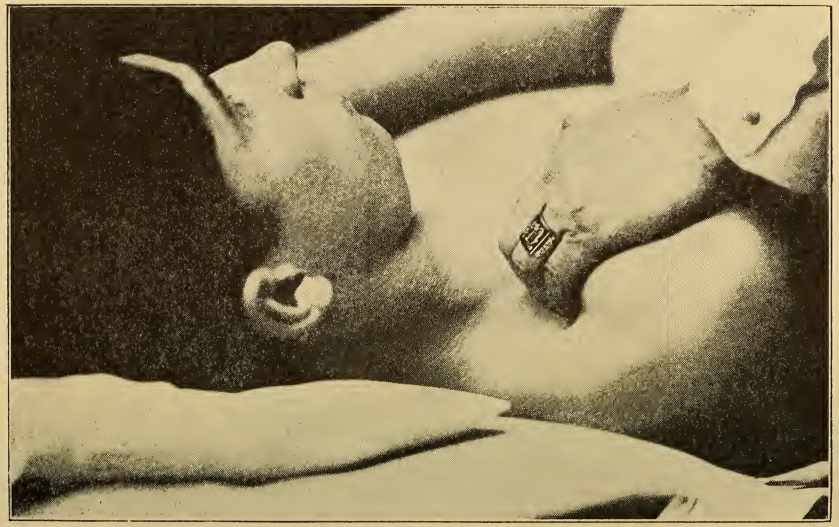

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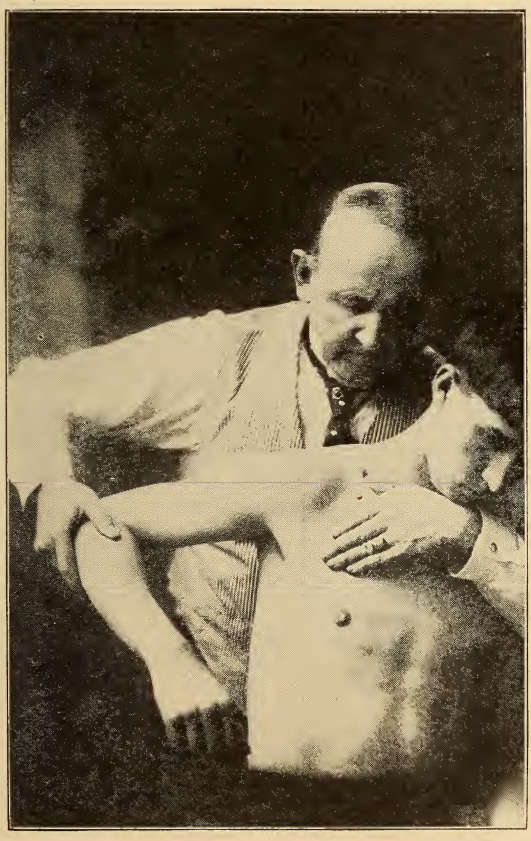

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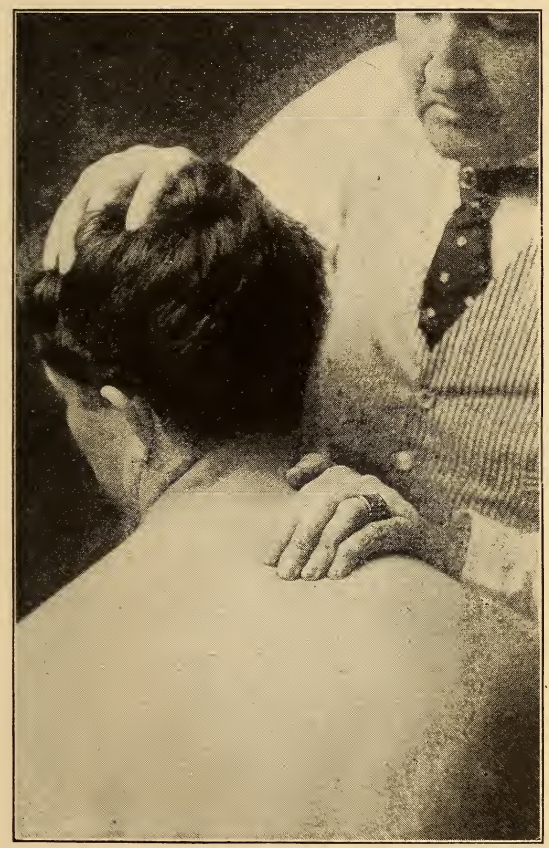

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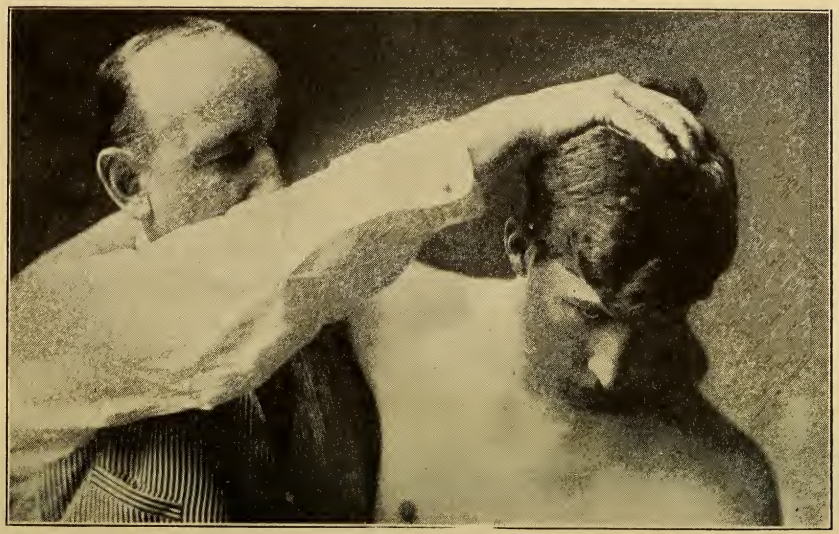

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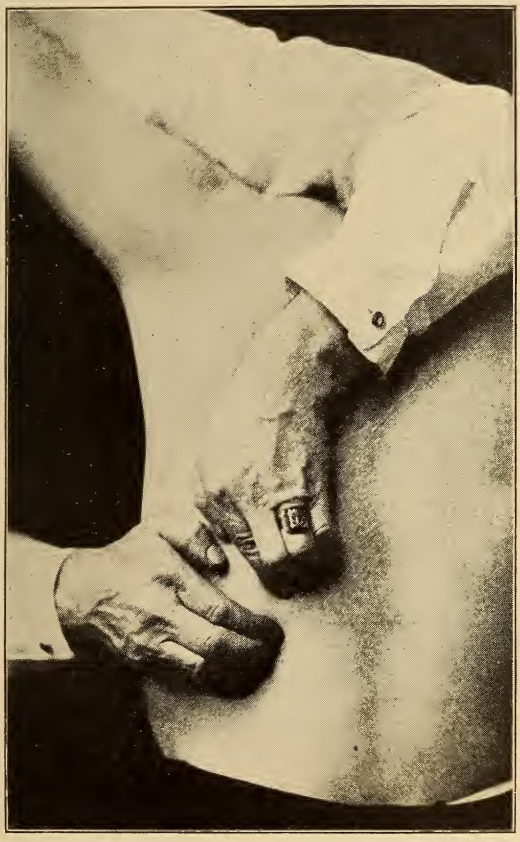


Figure 75

organs. The discovery of these lesions requires considerable anatomical skill, and an attempt to correct lesions here should only be made when the operator is absolutely sure of his diagnosis.

The whole pelvis may be tipped backward, in which case the superior posterior iliac spines will be found to be too prominent. In case the whole pelvis is on a torsion, one side back, the other side forward, one superior posterior iliac spine will be found prominent and the other less prominent than normal. In case one side of the pelvis is higher than the other, the superior posterior spine will be higher on the high side. The limb on the high side will be shorter than the limb on the low side. This may be determined by slightly manipulating both limbs to relax all tissues, and then comparing the internal malleoli of the tibia with each other. This may be done by placing them close together. Another way is to have the patient hold a tape line between the front teeth, and measure to the anterior superior spines of both ilia, and also to each internal malleolus of each tibia. In case the upper portion of the pelvis has moved forward, the superior posterior iliac spines will be found to be less prominent than in the normal pelvis.

In making the examination the operator will best determine the condition by having the back bare. Great care must be exercised in making the examination. The points of tenderness in case of luxation will be found over the sacro-iliac articulation, both

in the muscles and in the ligaments, interfering with nerves in the same region.

104. When the pelvis is tipped backward have the patient sit on a stool or table. The operator stands behind and places his knee against the upper part of the sacrum, while he takes the patient beneath the arms and pulls upward and backward on the trunk with a rotary motion to first one side and then the other. The assistant sits in front and draws the pelvis forward. See Fig. 42.

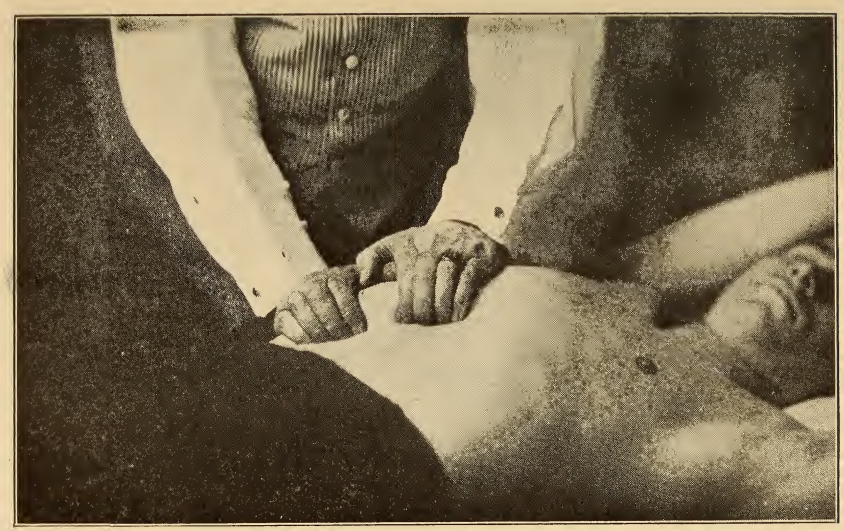
105. For backward tipping of the pelvis the patient may recline on the table with the face down. With one hand the operator makes pressure on the upper part of the pelvis, while he lifts the limb on that side with considerable force. This treatment is given first on one side then the other.

106. For a backward tipping of the pelvis the patient lies on the side on the table. The operator stands behind. The knee is placed firmly against the sacrum, and the shoulder and the leg are both drawn backward. This forces the pelvis forward. See Fig. 67.

107. When the pelvis is tipped forward the patient may lie on the side. The operator stands behind, and as he presses against the lower part of the sacrum and pelvis with one hand he pulls back with the other hand from the upper part of the front of the pelvis, the anterior superior spine of the ilium.

108. The patient sits on a stool, while the operator stands in front. The assistant is stationed behind the patient and holds the pelvis in front and draws

Figure 76



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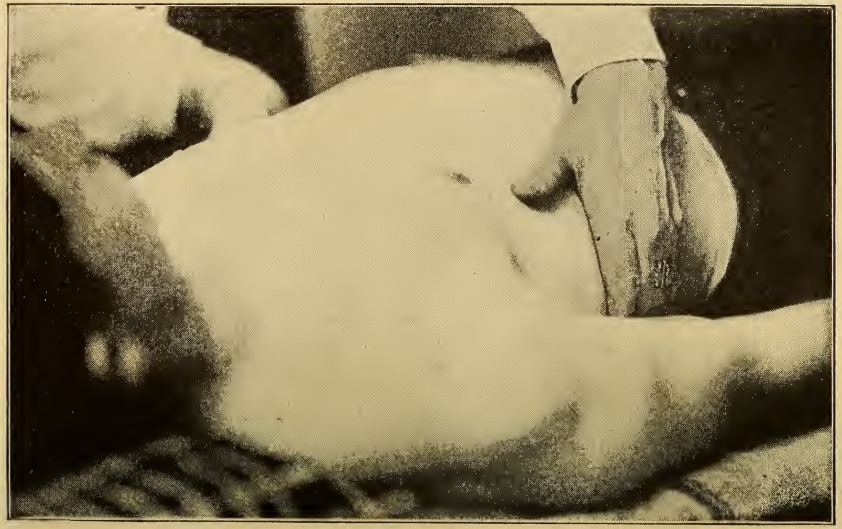

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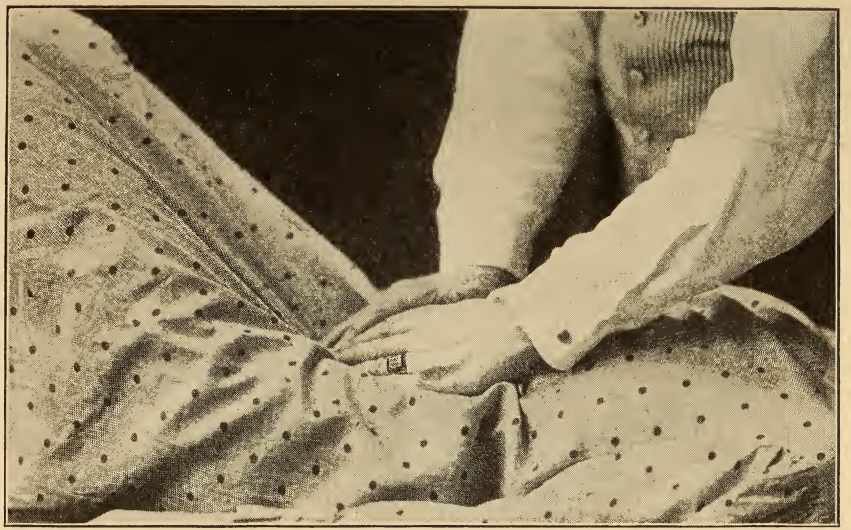

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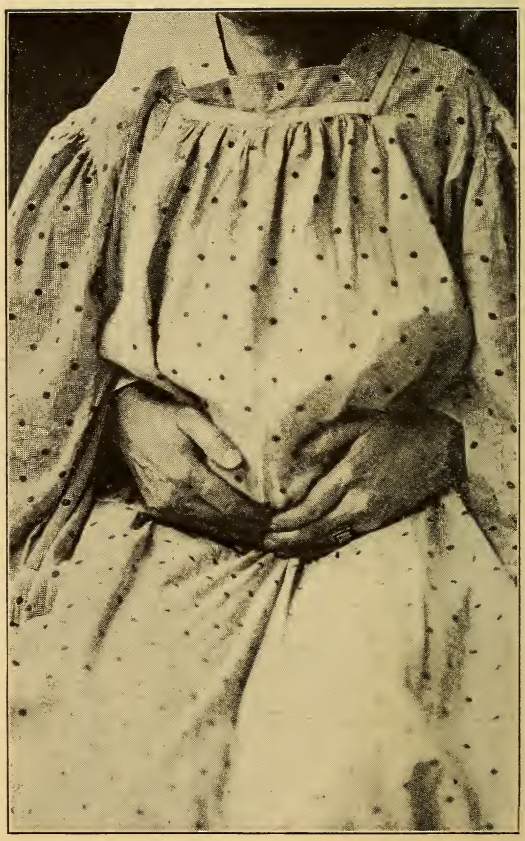

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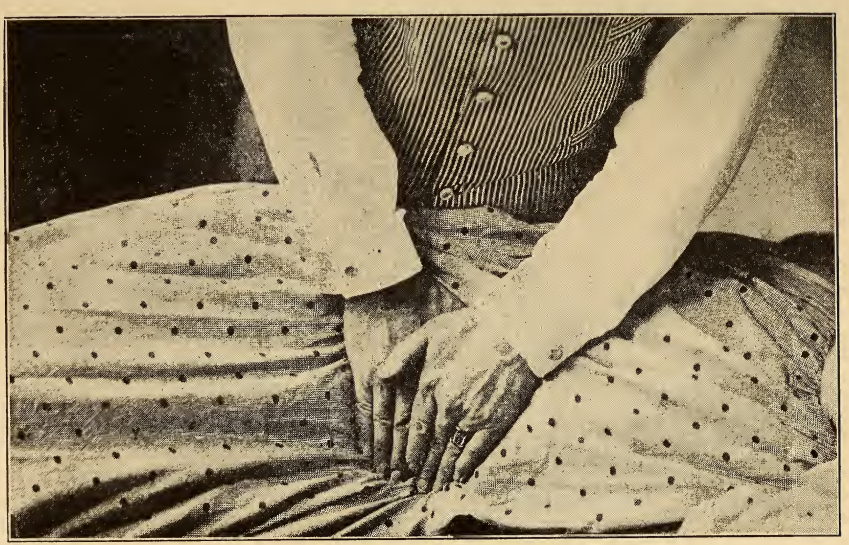


Figure 83

it backward, while the operator with his arms under those of the patient manipulates the body of the patient forward with a lifting, rotary motion.

109. Should the pelvis tip upward on one side, the quadratus lumborum muscle may be stretched, as in Figs. 59, 60, 61. Then No. 108 may be applied, with the assistant holding down the high side of the pelvis.

INNOMINATE LESIONS.

We frequently have lesions which affect only one side of the pelvis. We often find one of the innominates backward and downward at the same time; again one will be upward and forward. The former will lengthen the limb on the same side, the latter will shorten it. These lesions are the most common, but we may find their exact reverse. We may find both innominates luxated in different ways or in similar ways at the same time.

In order to determine these lesions we must depend on the position of the posterior superior iliac spines as indicated in lesions of the whole pelvis. We must compare the length of the limbs. Make measurements between the coracoids of the scapulæ and the anterior superior spines of the ilium. Look for tension and tenderness in the sacro-iliac ligaments; also at the pubic symphysis. Examine the lumbar region of the spine for curvature or torsion. Compare the waist lines. We may measure also from the teeth to ilium and to the internal malleoli. See Figs. 86 and 87.

110. When the innominate is luxated backward have the patient lie on the back. The operator places his fist beneath the posterior superior spine of the ilium. The other hand grasps the ankle and flexes the limb on the patient's abdomen, when the limb is rotated outward and downward with considerable force. In this manner the weight of the patient helps to force the innominate into position.

111. The operator may grasp the crest of the ilium, and also the tuberosity of the ischium, and by alternately pushing on the one and pulling on the other may set either a forward or backward luxation. This is done with the patient either lying on the back or on the side.

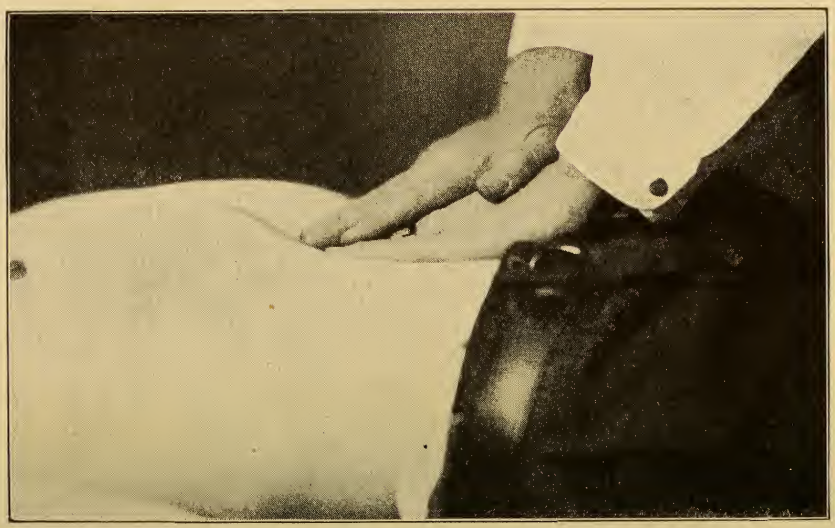
112. Combinations of the above movements, 110, 111, or the work used in correcting the whole pelvis, may be used in correcting any lesion of an innominate.

THE LIMBS.

The general treatment of the limbs may be modified in various ways for the treatment of different and definite lesions.

113. The limb may have various tissues relaxed preliminary to other work, by manipulating the various tissues by seizing the limb in both hands, as in Fig. 88, and with a rotary movement of the hands move and relax all the tissues to the bones.

114. Both internal and external rotation and circumduction of the limb may be performed, flexing the calf of the leg on the thigh and the thigh on



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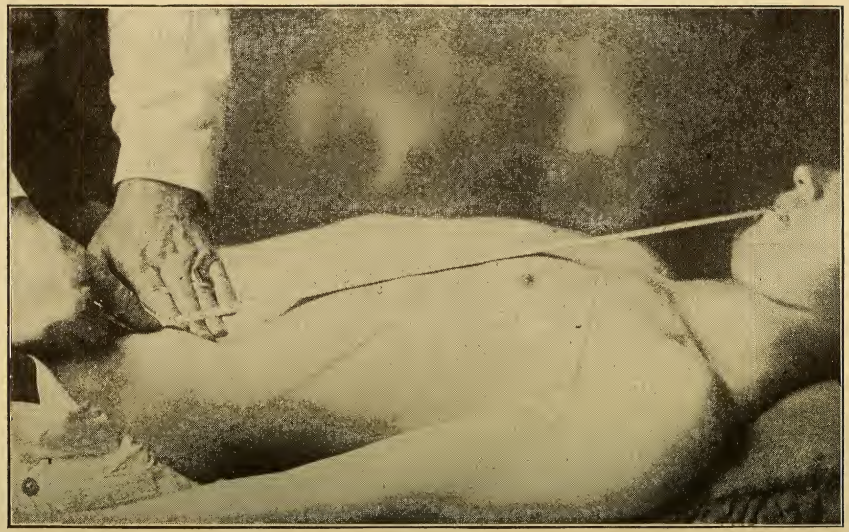

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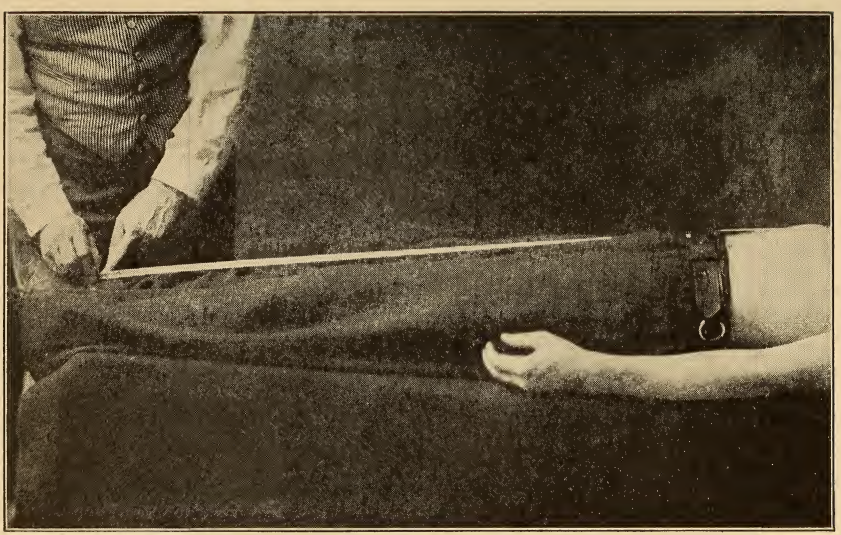

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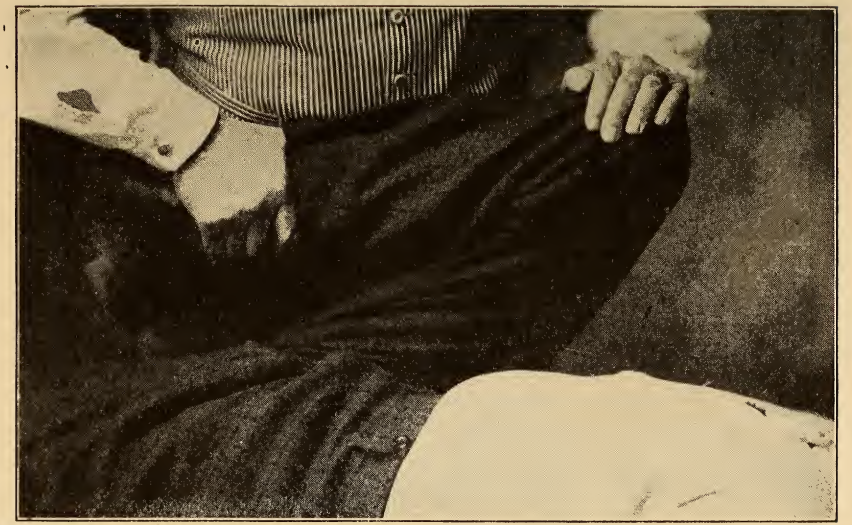

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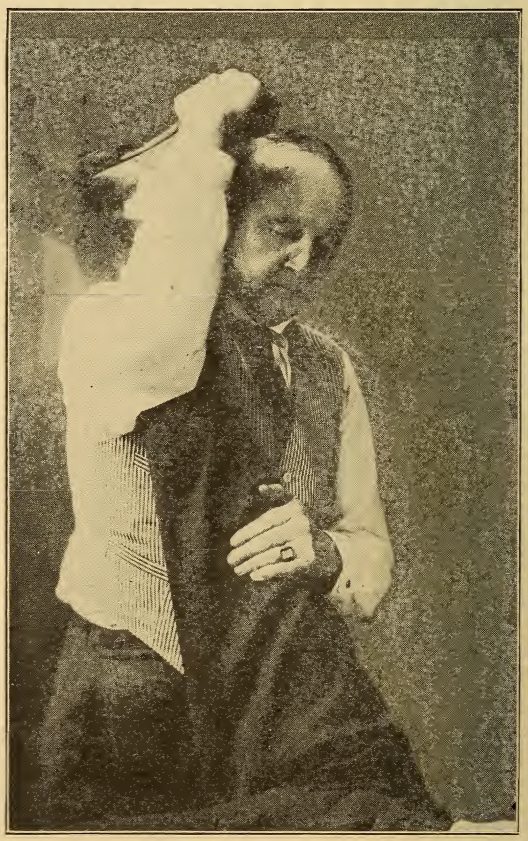

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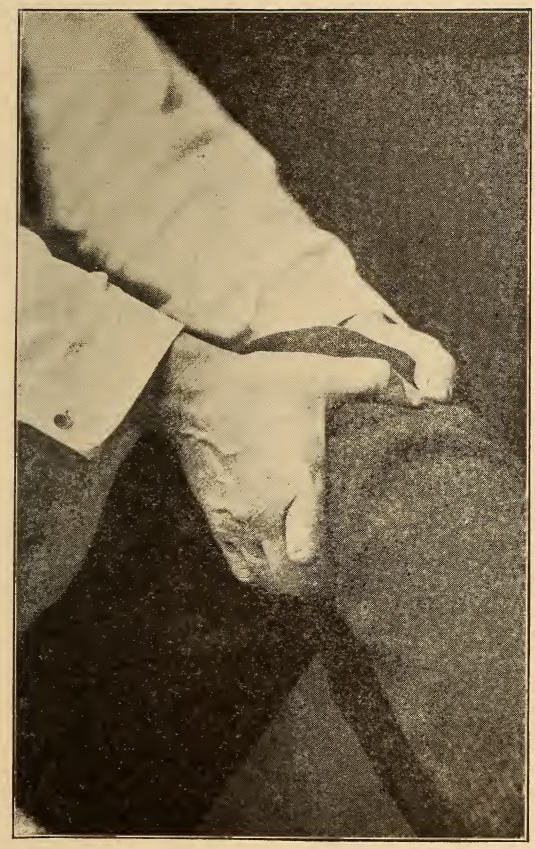


Figure 91

the abdomen, then straightening the limb out with the proper rotation, with more or less force. See Fig. 89.

115. The sciatic nerve may be stretched by extending the limb, as in Fig. 90, at the same time bearing down considerably on the foot.

116. The patient reclining, the knee may be slightly flexed and the operator works under it with both hands, stretching the muscles outward and working in quite deeply. See Fig. 91.

117. The foot may be flexed, extended and rotated with considerable force on the ankle. Ligaments and other tissues are thus relaxed and the circulation is promoted. See Fig. 92.

118. In treating the feet the arches may be sprung to increase the arch, and pressure and traction may also be applied to it. This relaxes ligaments, permits of replacing misplaced small bones and tones up the muscular structures of the foot. See Fig. 93.

119. The toes may be stretched and rotated with force at the same time. In some cases they must be handled with care. The treatment assists in the circulation by freeing all tissues, nerves and blood vessels.

120. The saphenous opening, through which the long saphenous vein passes, lies one or two inches below the lower end of Poupart's ligament, on the inner side of the thigh. This opening is often practically closed by tense muscles. It may be made free by external and internal rotation of the limb, as

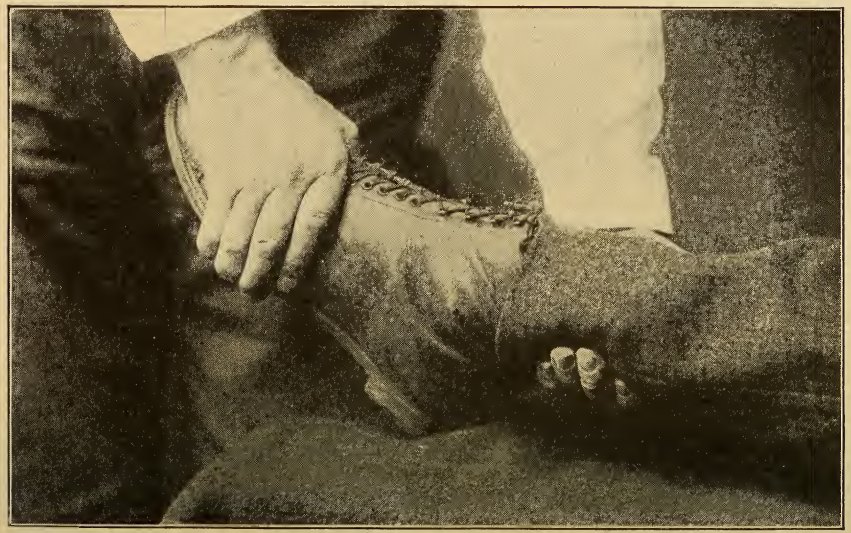
in Fig. 89. Then the opening itself may be manipulated.

121. The extended limb may be seized by the foot when the patient is in the reclining position, and turned outward as far as is comfortable for the patient, then be allowed to come to its normal position, See Fig. 94. This may be done, say ten times. Then it may be turned inward the same number of times. This movement puts the muscles on a strain by torsion, tones them up and assists in the circulation.

Old subluxations cause considerable trouble. A slight misplacement at the hip is often treated as disease of the knee, neuritis, etc. These misplacements are not always discovered by the ordinary physician, but when the real cause is removed the case is cured. Reducing these luxations, when the case is an old one, requires a course of treatment to relax all muscular tissues, to render the parts flexible and the ligaments more pliable.

122. When we discover that the hip is dislocated, with the head of the femur up and back on the dorsum of the ilium, in which the limb is short and the toes turned inward, we flex the knee and rotate it inward. This frees the head of the femur. Then we rotate outward and make extension while we press on the great trochanter to force the head into the acetabulum. See Fig. 95. This luxation comprises one half of all hip dislocations.

123. The head of the femur is sometimes down



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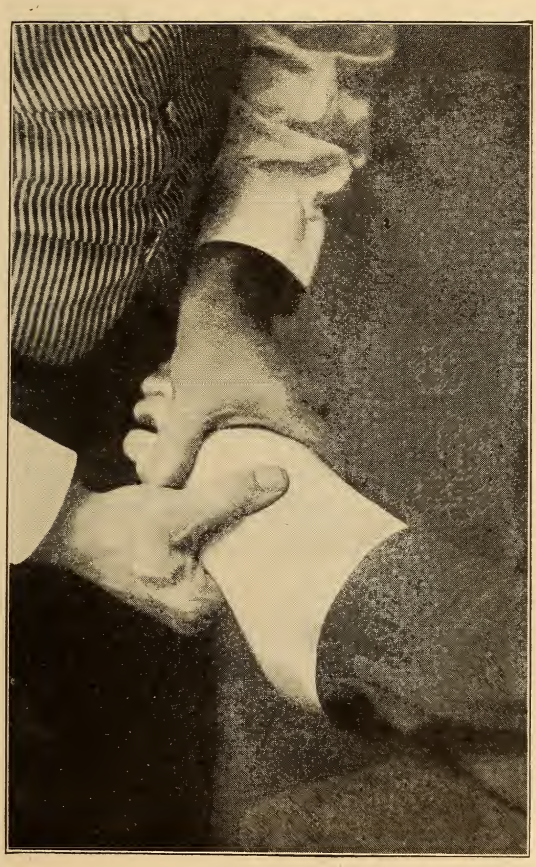
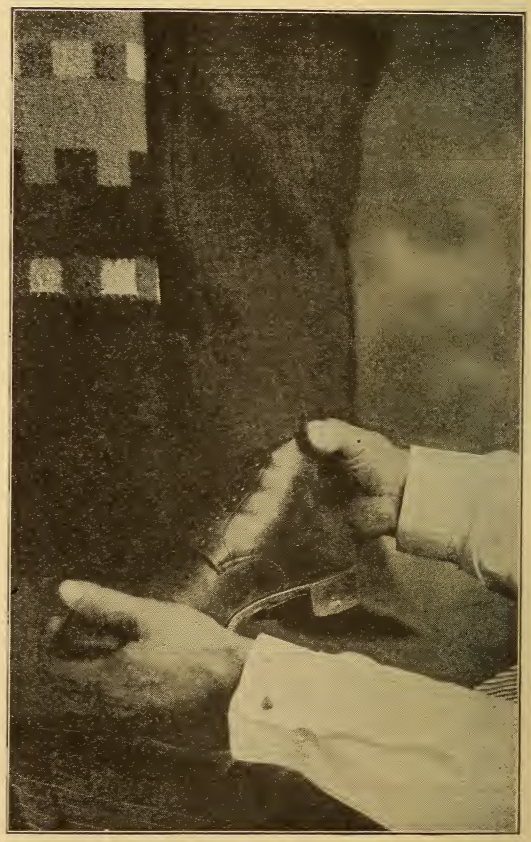


Figure 93.



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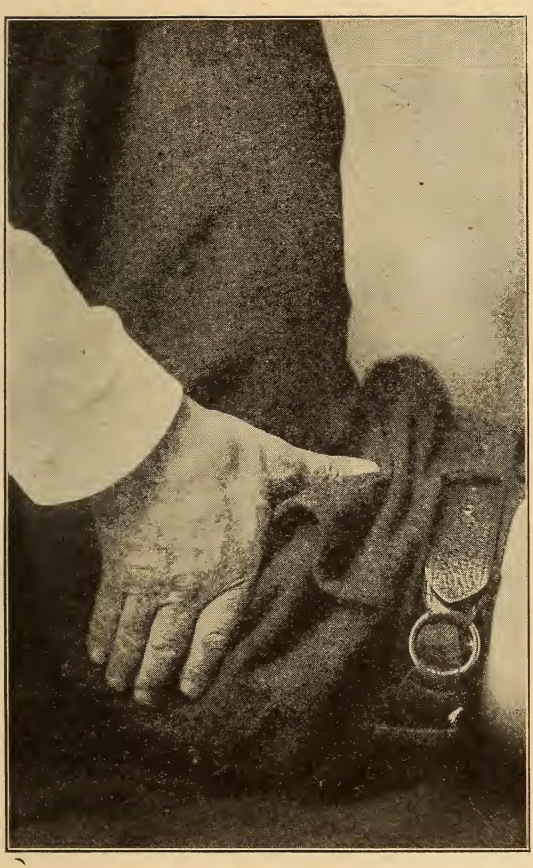

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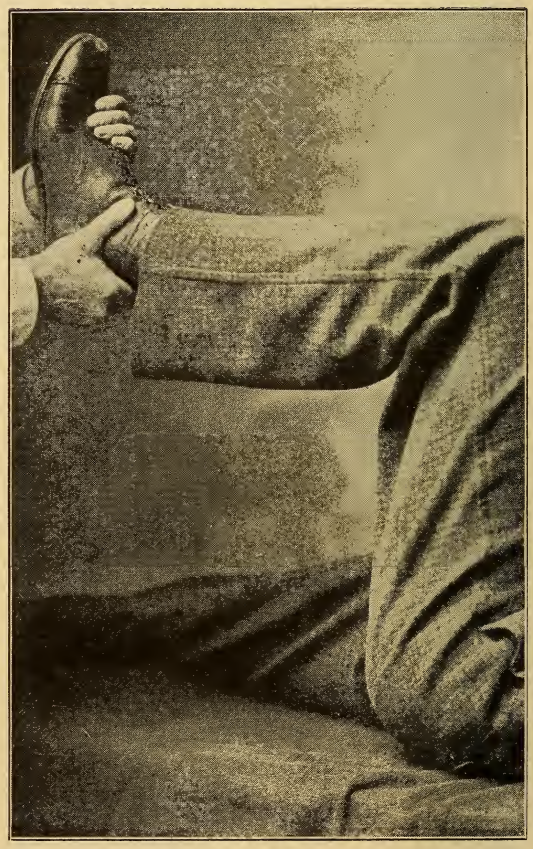

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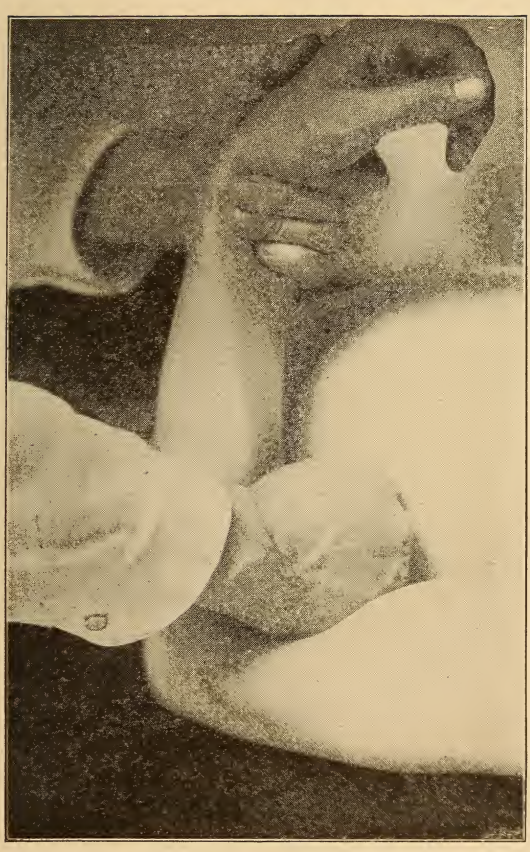


Figure 99

and back near the sciatic notch. This also shortens the limb and turns the toes inward. The treatment is the same as above, as one writer puts it, "bend up, turn in, roll out and extend." Use one hand to manipulate the great trochanter. See Fig. 95.

124. Sometimes there is a thyroid dislocation of the hip, in which the head has been forced downward into the obturator foramen. In this case the knee is flexed and the toe points either inward or outward. To make the proper reduction the leg is flexed on the thigh and the thigh on the pelvis. The knee is rotated inward as far as possible, followed by extension. Pressure is made at the same time to force the head of the bone into its proper position. See Fig. 95.

125. When the head of the femur is forward and onto the pubis the toe turns outward. The head of the bone can be felt and seen. Treat as in No. 124. Should this prove unsuccessful place the patient on the side and draw the limb backward with considerable force, stretching all the muscles about the head of the bone; then lift the head over the pubis and place it in its proper position.

126. Ankle dislocations are reduced by simple traction. The knee is flexed on the thigh, the thigh on the pelvis. An assistant holds the knee and the operator holds and pulls the foot, giving it at the same time a slight rocking motion. See Fig. 96.

127. Dislocations of the knee are reduced by strong traction. Pressure to force the tissues into place

may be made at the same time. The knee joint may be sprung by placing arm under the knee and pressing down on foot. See Fig. 97.

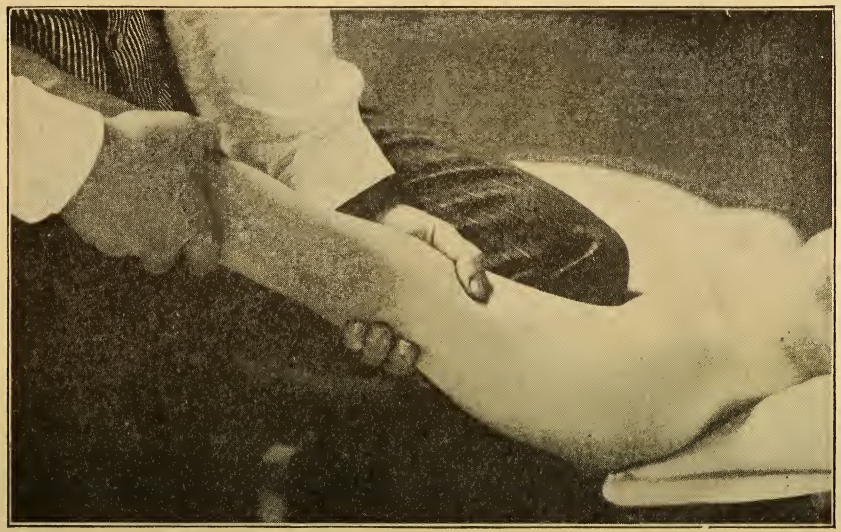
128. In treating the shoulder and arm the shoulder may be rotated as in Fig. 57. The operator grasps it before and behind the shoulder.

129. The shoulder joint may be sprung, as in Fig. 98. The forearm of the operator is placed in the axilla, and the arm of the patient pushed toward the side. This relaxes tissues and frees up the circulation. It may be freed of adhesions and the circulation promoted by seizing the wrist, bringing it back and up under axilla and stretching out in front with force. See Figs. 103, 104.

130. The elbow may be flexed on the same principle as indicated as in No. 129, by placing the clenched fist of the operator on the patient's arm just above the elbow and bending the arm upon the hand so placed. See Fig. 99.

131. In some cases it is well to work carefully down the arm, rotating the muscles on the bones and working carefully on the forearm between the bones. See Figs. 103 and 104. Fig. 105 represents the stretching of the long head of the biceps, after which the arm will be flexed and the tendon pressed into its groove.

132. All dislocations of the shoulder may be reduced by having the patient recline. The operator places his stockinged foot in the axilla and makes strong traction on the arm of the patient. The



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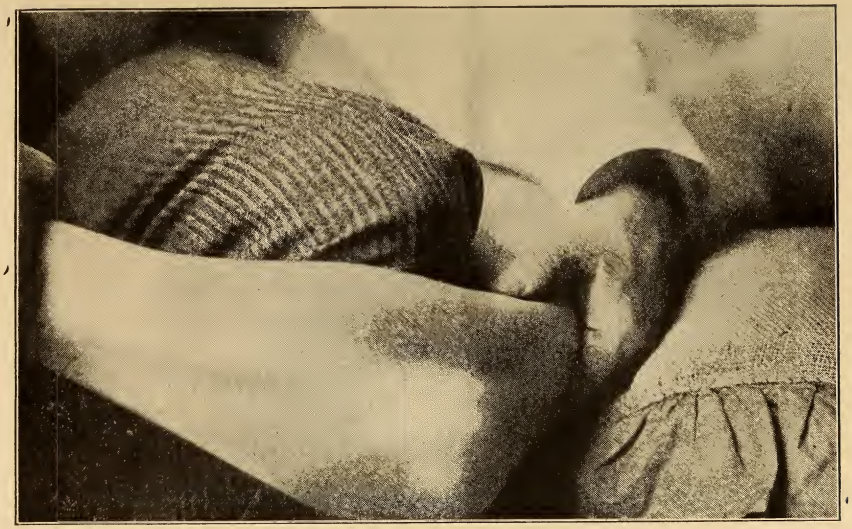

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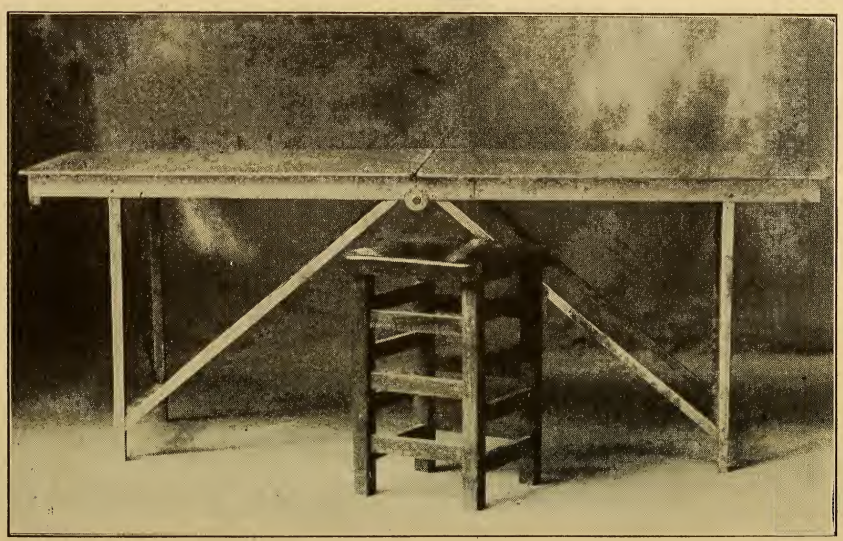

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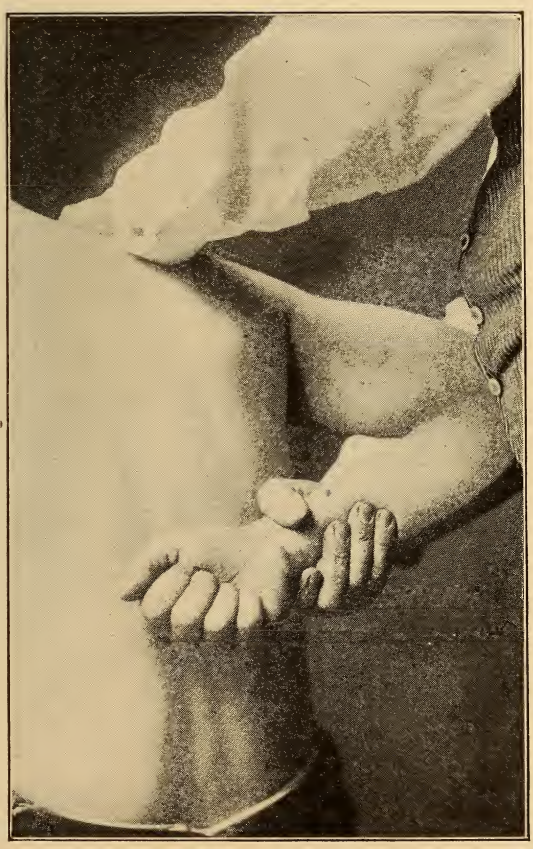

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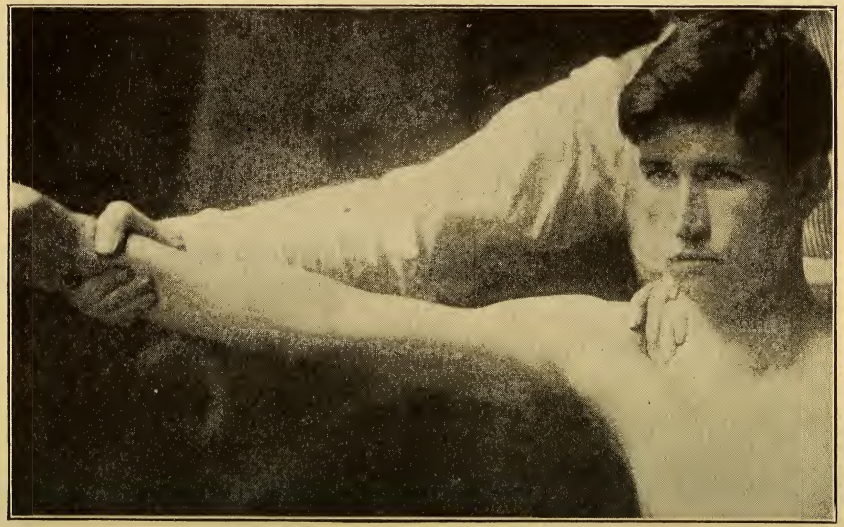

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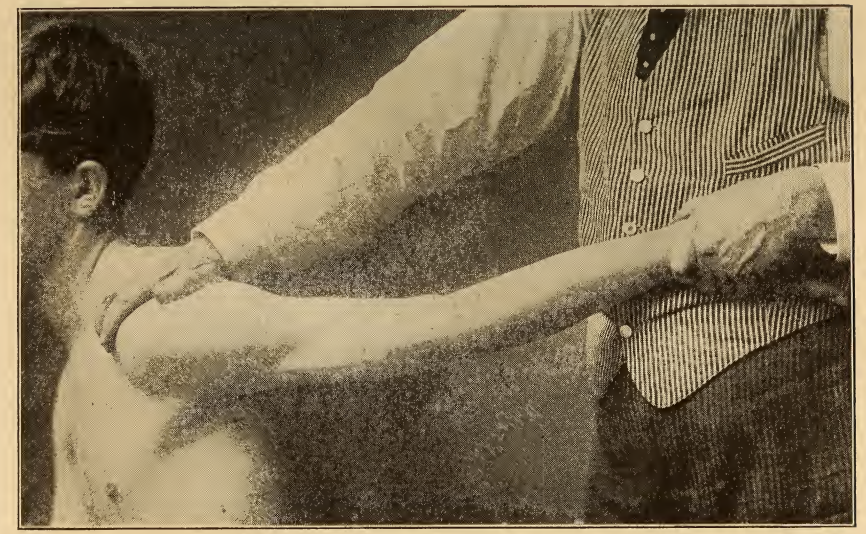

Figure 105

Figure 106

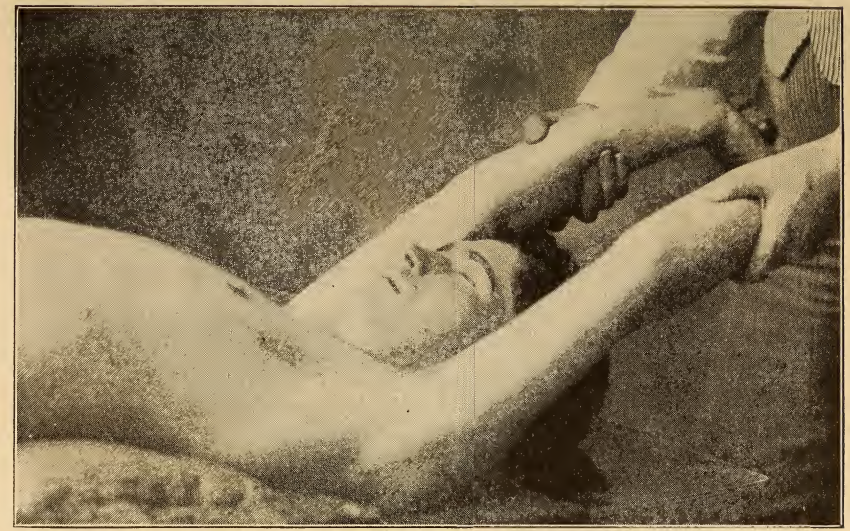

Figure 107

knee may be used instead of the foot, as in Fig. 100.

133. In cases of elbow dislocations, where both bones are displaced backwards or displaced externally or internally, or the ulna is backwards, the operator places his knee in front of the elbow joint, pressing against the ulna and the radius with the knee and bends the forearm. This plan uses the muscles to pull the bones into place. When the radius is backward the above or simple pressure, with manipulation, may be used. For forward dislocation bend the elbow over the knee. Use extension and manipulation. See Fig. 101.

134. The various wrist dislocations are all reduced by traction. Some manipulations may be used.

135. Should the ulna be dislocated at the wrist, pressure will be sufficient.

136. For the various dislocations of the hand use pressure, traction and rotation.

In many cases of old dislocations a prolonged course of treatment is necessary.

137. A table and stool are represented in Fig. 102. The stool is fourteen inches square on top and twenty-one inches high. The table is a folding one with a steel frame and thin wood top. It can be carried easily to the patient's home. One for regular office use would be padded and more substantial in design. The table represented in the cut is five feet and ten inches long, and twenty inches wide and twenty-six inches high.

138. A General Treatment is given by a great many Osteopaths in connection with the specific treatment needed for the ailment for which the patient is being treated. General treatment is an advantage in a number of cases. It is given for nerve troubles and for the general circulation. The treatments will vary greatly with different Osteopaths but the following is a sample:

139. The patient reclines on a table, lying on his side. The Osteopath begins by loosening up the tissues of the back, as indicated in Nos. 53, 56, 58. The shoulder is manipulated, as in Nos. 54, 55, the lower limb as in No. 113. The spine is sprung from one end to the other, as in No. 57. The patient then lies on the other side and the treatment is given as before. The patient then takes the reclining position, when further treatment is given the back as in Nos. 47, 48, 50, 51, 52.

Afterward the patient lies on the back and the treatment is commenced at the head, as in Nos. 14, 15.

The neck is treated as in Nos. 7B, 9, 10, 11, 13. The arms are treated as in Nos. 130, 131.

Further treatment is given the back, and the ribs are raised as in Nos. 61, 62, 86, 64. The abdomen is treated as in Nos. 94, 95, 96, 100, 101, 102. The lower limbs are treated as in Nos. 113, 114, 115, 116, 121. The patient now sits on the side of the table and the back and spine are further treated as in Nos. 1, 2, 5, 34, 36, 37, 43, 44.

THE SPINE.

The spine, in its normal condition, is a chain of flexible nature. It is formed of a number of bones called vertebræ, from the Latin vertere, to turn. There are thirty-three of these vertebræ, of which seven are in the cervical, or neck region, twelve are in the dorsal region, which occupies the space from the neck to where the small of the back begins, five are in the lumbar region, the small of the back to the sacrum, five are in the sacral and four in the coccygeal region, which is the coccyx. The twenty-four upper vertebræ should remain separate and flexible through life. Those in the sacral and coccygeal region, in the adult are firmly united and form two bones, the sacrum and coccyx.

The spine has four normal curves, the cervical, dorsal, lumbar, and pelvic. The first, or cervical, extends from the base of the skull to the second dorsal vertebra. This curves inward. The dorsal curve extends from the second dorsal vertebra to the first lumbar vertebra. This is an outward curve. The lumbar curve extends from the first lumbar to the sacrum. This curve is a forward one. The sacral curve begins at the union of the last lumbar vertebra with the sacrum and extends to the tip of the coccyx. This is an outward curve.

In very young children the cervical and lumbar curves are absent, and when the child is sitting the spine presents only one curve from the base of the

skull to the end of the spine, and this curvature is an outward one. The cervical and lumbar curves are called compensatory, and develop a little later. The curves of the normal spine should be frequently examined, until the operator has a good idea of the normal spine. He should be acquainted with the normal flexibility of the spine as well.

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